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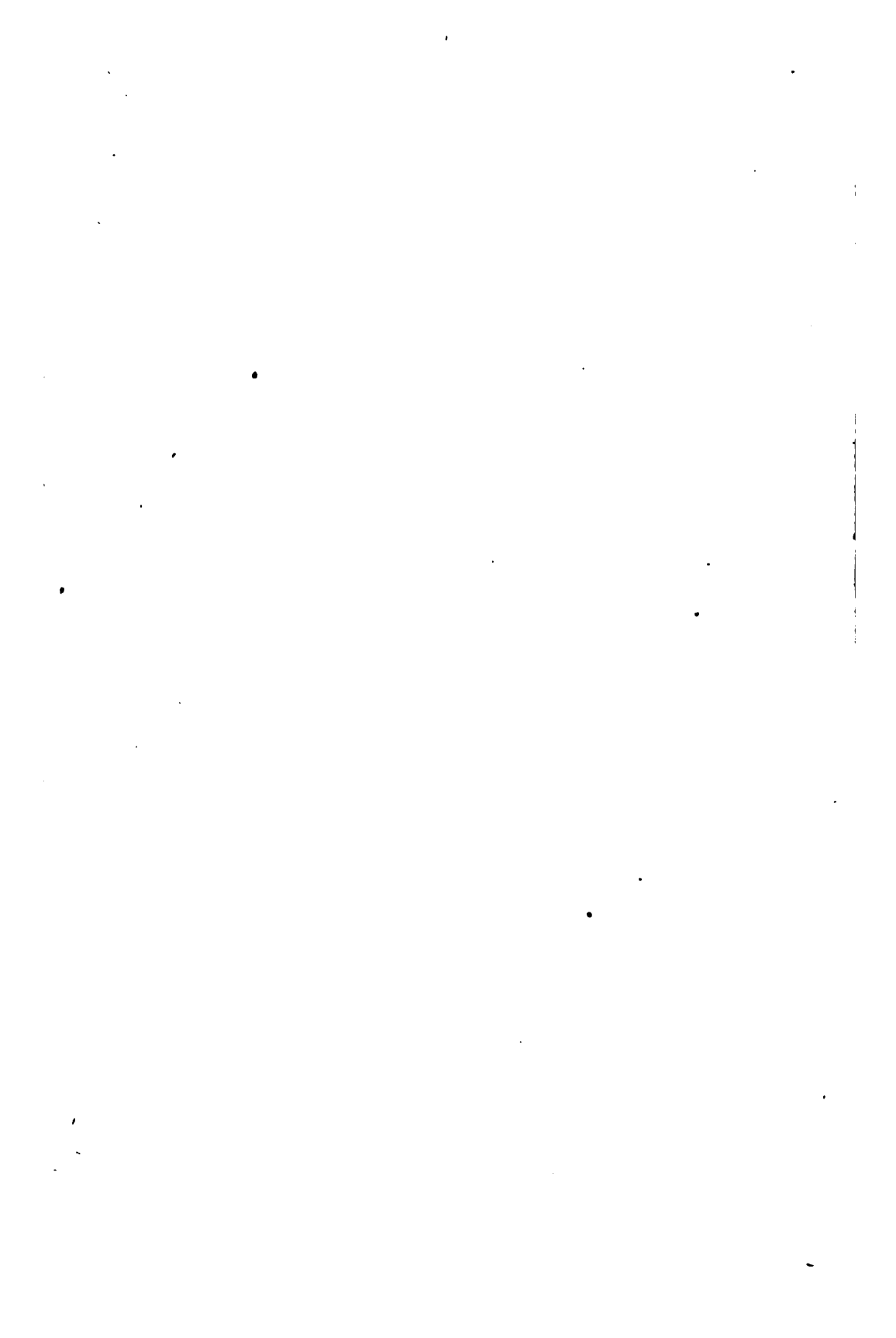
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2

**QUARTERLY EPITOME**

OF AMERICAN

**PRACTICAL MEDICINE AND SURGERY;**

**Supplementary**

TO

**BRAITHWAITE'S RETROSPECT;**

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN  
THE MEDICAL SCIENCES, ABSTRACTED FROM THE CURRENT MEDICAL JOURNALS  
OF THE UNITED STATES AND CANADA.

PART XXI.....MARCH.....1885.



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ptomaine which was found in the body. Besides the poisons named there is strychnine, colchicine, atropine, conifine, woorara, nicotine, veratrine, hyoscyamine, nardeline, the symptoms and chemical reaction of which are the same, or almost so, as the cadaveric poisons. Lecithine is found in putrid fish; a very dangerous chemical poison has been extracted from putrefying Indian corn and rye. Thus it is that many cases of poisoning with cheese, meat, fish, sausage, jelly, and yeast, many of them resembling acute infectious, fevers, may find, and indeed have found, their ready explanation.

Brieger found quite a number of different varieties of cadaveric poisons—neuridine, neurine, muscarine, æthylendiamine, gadinine, and others. Many of these destroy life in a short time, and with the symptoms of acute infectious diseases. These poisons are found, in many instances, in the fresh dead body, not in that one which has undergone complete putrefaction. The results of putrefaction will, after a while, change entirely and become rather wholesome than injurious. Many years ago, Salkowski examined a vessel full of ascitic fluid, which he knew to be in utter putrefaction when he last inspected it. Not only was there no putrefaction any more, but, on the contrary, chemical decomposition had formed phenol. Thus putrefaction had worked its own destruction and antidote. The inference, then, is that a poison, even in the course of the same disease, may not always be found.

Ptomaines are often met with in the presence of bacteria. Is it the latter which produce them? Do they so decompose the albumin of the tissue that a ptomaine must or can develop? Or is it their own vital change which produces it? Most modern writers—not chemists—believe it. But if the cause of decomposition of the living or dead be not bacteria, but a chemical poison after all, is it necessary to assume that the poison cannot form except through and with the presence of bacteria? And is the bacterium the only poison? or the only source of the poison?

If deadly poison, such as we know to destroy life suddenly, or almost suddenly, and of such virulence as is reported in what was formerly believed to be legendary only, but which may be historical, will almost invariably originate in the dead body, is it so impossible that it may develop in the still living under certain circumstances? Have we not had enough yet of the monthly instalments of new bacilli which are the invariably correct and positive sources of a disease, and replaced by the next man who comes along? Have we not yet enough of the statements, that, as for instance several bacilli are claimed each to be the only cause of diphtheria, by several observers, that there may be several distinct bacilli everyone of which can produce the same scourge? Is it not just as safe to still presume, that, when several forms of bacilli are believed to be such sole causes, that the real cause is in neither?

Exactly so, neither in one nor in the other, notwithstanding it all appeared settled. For our journals are replete with the very latest authentic bacterium of diphtheria. This time it is neither Klebs nor Eberth, but Loeffler. Reports, discussions, and even editorials carry his name over the world. The very nature of diphtheria is said to be revealed again, as several times before; still, the discoverer admits that there are cases without the bacterium.

A dozen years ago the coccus of whooping-cough was said to be discovered. There was no doubt about it. There was whooping-cough, there was a coccus, what was plainer and more conclusive? To cure whooping-cough, nothing is required but to kill the coccus. Quinine will kill a coccus, quinine cures whooping-cough. Since that time there is no more whooping-cough in existence; or, if a case would be malevolent enough to turn up, it could not last longer than until a few whiffs of quinine can reach it. That is ludicrous, is it not? But it was preached like gospel, and it was believed. Many more such have turned up, and will turn up, for coming years to smile at.

There is a peculiar feature in this bacteriomania. Its principal impetus it received in Germany at a time when great changes had taken place in its political and financial affairs. All at once there was an Empire, of which historians so much spoke, youth so much dreamed, romancers so much fabulated. All at once, at the same time and a decade before, an unusual indus-

triousness, commerce, enterprise, and unwonted wealth, and still more expectations than wealth; all at once an influx of five thousand millions of francs, not earned by honest work, but conquered by war, which could not but turn the poor heads and unstable the solid foundations of regular development. From that time dates that lack of safety and steadiness in German financial circles. They have even invented a name for that period of swindling, "gründerthum." Speculation was rife—fortunes were made in a day from nothing but self-assertion and daring and lost as quickly.

The moral and intellectual atmosphere created by these tendencies is never breathed by one class of people only. If self-assertion can make a fortune in finance, why not in science? If a reputation may perhaps be made by a stroke of chance, why not try that chance? Speculation was rife. Any young man can look through a microscope, perhaps he will draw the prize in the lottery of alleged science. Looking would be all right, if he would not write. Medical life would be easier if there were less journal articles containing the latest infallible discoveries. Thus it has come to pass that German medicine has a two-fold aspect nowadays. The days of her superiority are not over yet, her greatest men still live, and the toiling thinkers are at work, but the number of speculators is immense. A great many of the articles printed in the journals of the last ten years have been prematurely published, the number of preliminary notices announcing discoveries under way is very large. The great embryo cannot wait. He is afraid of having his celebrity snatched away from him by the next door microscopist.

Thus it is that we often find a difficulty in keeping our eye on the great lights, whose rays are always welcome. If learned and thoughtful specialism has its justification anywhere, its field is the solution of the mooted questions alluded to. Thus far I claim, however, that in regard to bacteriology, the main questions are before the medical world still. I firmly hope the Academy will prove the centre of critical researches by which the problem, whether bacteric or chemical poison, still a mystery, will be carried nearer its solution.

## MALARIAL FEVER—ITS ETIOLOGY, PATHOLOGY, SYMPTOMATOLOGY AND TREATMENT.

By J. D. SMITH, M.D., Dyersburg, Tennessee.

From the *Miss. Valley Medical Monthly*, January, 1885:—Malarial fever is caused by ferment, composed of living vegetable organisms, originating in soils of the most varied chemical composition, requiring a moderate degree of persistent moisture, and a temperature of not less than 67½° Fahrenheit for its production, rising from the earth's surface with the ascending atmospheric currents produced by a hot earth and a cool atmosphere in the late afternoons and the early mornings of our hot summer days, entering the system through the medium of the lungs, and attacking directly the red globules of the blood, setting free the hematin, reducing the number of red globules and increasing the white, disturbing, by reason of its blood-destroying powers, the function of nutrition and excretion, and finally, through these agencies, destroying the proper balance of the nerve centres. This fever is the most varied in type of all fevers, and is of a grade varying from the most malignant and rapidly fatal to an insignificant paroxysm occurring once in three days, with pathological changes numerous, diversified, and greatly influencing the character, duration and termination of the disease. These changes constituting the pathological anatomy of the disease, may affect, more or less, every organ and tissue of the body.

There is a class of cases in which no decided, subjective symptoms of malarial poisoning have manifested themselves until the blood structure has been almost completely destroyed, the tissue of the glandular organs has become weakened, their functions seriously impaired, the sensibility and reactive powers of the nerve centers obtunded, and the circulatory system so depressed that, when the onslaught does come, the system is either overwhelmed by the attack, the patient dying early, with enormous distension and softening of

the abdominal viscera; or, surviving for a short time, sinks from exhausting hemorrhage of the kidneys, bladder, stomach, bowels or nose; or, surviving the hemorrhage complication, has a slow and tedious convalescence. Or, the attack being less severe, feeble reaction of a more or less decided character occurs; a low type of fever supervenes, more or less blood stasis, with or without capillary thrombosis, exist in every vital organ of the body; so that, at any time during the progress of the case, necessarily protracted in its duration, the patient is not only liable, but decidedly predisposed, to brain, lung, liver, spleen, kidney, stomach and bowel complications of an inflammatory character, giving rise to every symptom that has ever been brought forward as characteristic of that form of the disease unfortunately known as "Typho-Malarial Fever"—a name manufactured on the spur of the moment by an eminent man who afterward, upon calm reflection, utterly repudiated it as unworthy a place in medical nomenclature.

The literature of malarial fever has not been written by those who have observed and studied the disease at the bedside, but, as a rule, by men who knew practically much more of typhoid than they did of malarial fever; hence, typhoid fever, being with them the leading fever, and foremost in the mind, every apparent abnormality or variation from a simple type, has been made a part of typhoid fever. Malarial fever has been robbed and stripped of its pathology, and almost of its identity. It is admitted almost if not quite, universally, that malaria may make its impress upon almost every form of disease to which human flesh is heir; but strangely enough, men are slow to concede the fact that a pathological condition growing out of the long continued action of malaria may modify and change the course and duration of the specific fever produced by active malaria itself. That these premises are correct is evidenced by the fact which all must admit, that a compound can not exist in the absence of the different elements that go to make it up. A Simon-pure, well developed, unequivocal case of typhoid fever, about which there could be no dispute or difference of opinion among expert medical gentlemen, is one of the rarest things that occurs in this whole malarious Mississippi Valley country. And yet, if we are to credit the diagnostic skill of many of our best physicians, typho-malarial fever is of frequent occurrence and widespread prevalence. Strange, indeed, that we should have the mule, without the jack to sire him.

The treatment of an uncomplicated case of malarial fever is now one of the simplest things in the whole range of medical practice, while the judicious management of the variously complicated cases requires an amount of skill equal to that necessary to the proper treatment of any other disease with which the physician is liable to come in contact. To neutralize malarial poison in the system, and to abort uncomplicated fevers resulting from that poison, there is nothing, singly or combined, known to the medical profession equal to quinine. It is before and after and in the midst of everything else. It is the one thing needful; and the sooner the system is saturated with it the better. To delay, in order to purge a patient, is like carrying the furniture out of a burning house rather than extinguishing the flames while yet entirely under control. Really, it is the only medicine absolutely necessary in these cases, and may be given in a few large and decided doses, or in smaller doses frequently repeated, to suit the fancy of the physician or the whims of the patient; but, while decided and effectual in its action when given alone, it may be greatly assisted in rapidly reducing high temperature, and made to affect much less unpleasantly the brain and nervous system, by the conjoined use of the arterial and nerve sedatives. From four to six grains of quinine given every four hours, with three to five drops of tincture of veratrum, or tincture of aconite root, with an equal quantity of fluid extract of gelsemium, and ten grains of bromide of potassium, given in the intervals between the doses of quinine, will bring down high temperature much more rapidly, and affect unpleasantly the brain and nervous system much less, than the same amount of quinine given alone. This course, begun early in the disease and kept up persistently for forty-eight to sixty hours, leaving the arterial sedative out when the temperature is near the normal, will effectually break up any uncomplicated case of malarial fever.

Nor are its effects any the less beneficial and certain in complicated cases, provided the complications are of an active inflammatory character; but in these cases it is necessary to push the treatment for a much longer time, for if the quinine and other sedatives are withdrawn before the local inflammations have subsided, these inflammations will reproduce a fever, not of the original type, but of an irritative character.

But of all the adjuncts to quinine, in the treatment of low forms of malarial fever, I know of none equal to a combination of arsenic, iodine and carbolic acid, as the following:  $\mathcal{R}$  Tinc. iodine, fl. 3 j; Fowler's solution, fl. 3 ss.; carbolic acid,  $\mathfrak{m}$  xvj; water, qs.  $\mathfrak{z}$  jv.  $\mathcal{M}$ . Sig.—Teaspoonful every four hours. I know of no condition that may arise in low types of malarial fever, in which this combination does not answer a good purpose. There is a chemical incompatibility in the prescription, but it does not affect its virtues. When the carbolic acid is decidedly objectionable to the patient I leave it out; and when the stomach is extremely irritable I give the arsenic alone.

Of no less importance than medication, is alimentation, more especially in protracted cases.

In some cases the stomach will not retain anything; in others congestion is so great that the system will not absorb or take up anything that the stomach does retain; and in another class of cases there is a state of coma, or convulsions, and the patient can not be induced to swallow anything; and in still another class of cases the near approach of a seriously threatening paroxysm may leave no time for the stomach to absorb anything; and yet, these are cases above all others that imperatively demand the immediate use of quinine. With a solution of quinine of definite strength and a hypodermatic syringe, congestion, nausea, vomiting, coma, convulsions, or the near approach of a terrible paroxysm, as obstacles to immediate, rapid and effective treatment by quinine, may all be defied.

The formula I use is the one given by Bartholow in his work on Hypodermatic Medication, 4th ed., p. 328: " $\mathcal{R}$  Quininæ disulph., grs. i; acid. sulphuric. dil.,  $\mathfrak{m}$  c; aquæ font.,  $\mathfrak{z}$  j; acid. carbolic. liq.,  $\mathfrak{m}$  v. Dissolve. Place the quinine and water in a porcelain dish over a spirit-lamp, heat to the boiling point, and add the sulphuric acid, stirring with a wooden spatula. Filter at once into a bottle and add the carbolic acid. This gives six grains to the drachm."

Morphine may be injected at the same time to quiet the irritability of the nervous system, and atropia may be added to prevent the depressing effects of both quinine and morphine on the heart's action.

*Moderate doses used hypodermatically always produce the specific effects of the drug.*

Quinine in perfect solution, and a syringe in good working order, should always be carried by the physician. The arm should never be selected for quinine injections, but the epigastrium and the abdomen, and at points not too near the cartilages of the ribs.

One complication deserving of special attention, and one with which the writer has had much to do within the last eighteen months, is entero-colitis, and we might add rectitis or dysentery.

The discharges that are composed mainly of bloody mucus are of frequent occurrence, and their passage is attended with severe pain and tormina.

Opiates in doses sufficient to give relief, either by the stomach or hypodermatically, are indispensably necessary, and should be repeated sufficiently often to maintain their decided action. The judicious combination of atropia with the opiates in these cases is of paramount importance. Indeed, the atropia can almost say to the opiate in its depressing effects: "Thus far shalt thou go and no farther," and from thy use no harm shall befall this patient.

## INVERSE TYPE OF TEMPERATURE IN TYPHOID FEVER.

By W. C. HOLLIFETER, M.D., of Philadelphia.

From the proceedings of the *Philadelphia County Medical Society*:—The classical investigations of Wunderlich, Thierfelder and Traube have done much to simplify the study of fever, and by their deductions they have ren-

dered it possible for us to differentiate typhoid from all the other continued fevers by its temperature alone.

I enunciate a well-recognized fact when I state that every physician in general practice has had cases of typhoid fever where the temperature record has been irregular, when, at the morning or the evening visits, the thermometer has registered the same, or has shown some unusual features in the evening exacerbation, or morning remission, departing in some unsatisfactory manner from the gracefully arched curve of Wunderlich.

It has frequently been my lot to treat cases of fever having every symptom of typhoid, yet not responding to the well-marked type of temperature, as described by Wunderlich. For a long time, it was very difficult to assign any cause for the variation, although it is natural for complications to disturb the rule, especially when we anticipate a typical curve in the temperature chart.

Dr. Wm. Pepper has stated, in a recent clinical lecture, that "it was the exception, and not the rule, to find a typical case of typhoid fever." Although every symptom may be uncertain, or even frequently wanting, in some cases of typhoid fever, yet I believe the temperature, the peculiar form especially, remains the most constant factor, and as Griesinger states, it "generally controls the situation."

During the last seven months, I have had under my care a case of typhoid fever in which the temperature record corresponded to the "inverse type," as described by Traube.

Baumler, in drawing attention to this unusual character of the temperature, states that, in the great majority of the cases, the daily fluctuations follow the rule of health, the exacerbation taking place in the evening; we sometimes meet with cases where this order is *reversed*, the rise taking place in the morning, and the remission occurring in the evening.

This "inverse type," so named by Traube, of the daily fluctuations of a febrile temperature has been observed in some rare instances in typhoid fever.

I have been unable to find any additional reference to this usual type of temperature in the systematic treatises on fever; Liebermeister or Murchison do not mention it in their works, nor have I been able to find any clinical reports bearing on the subject, in any of the medical journals.

The author of the paper then gives the histories of his cases and closes with the following remarks: While it has been my principal object to record these cases typhoid, as departing in a measure from the temperature law of Wunderlich, I wish to call your attention incidentally to the following facts: (1) Six of the group of cases noticed in this paper were children, yet we had a severe course of the fever, and the temperature record commenced high, showing frequent irregularities. Wunderlich states, that in children, particularly in the younger subjects, the course of typhoidal temperature is somewhat irregular. The commonest of these irregularities is its extreme mildness; yet the temperature rises in the first days to a higher average than in adults: it passes more quickly into the remitting period, and defervescence is less protracted, but complications often occur, closely indicated by the temperature. (2) In the nine cases of typhoid, including mild as well as severe examples, we had four cases of intestinal hemorrhage; an unusually large percentage. Systematic writers on fever regard intestinal hemorrhage as a rare and grave symptom. While Liebermeister states that there is not a single symptom belonging to typhoid which can be characterized as pathognomonic, yet a tendency to diarrhœa is quite frequent and intestinal hemorrhage quite rare, in our cases we found the bowels confined in over half of the cases. Dr. Broadbent looks upon constipation in typhoid as of sufficient importance as to entitle the fever a distinct variety.

#### TREATMENT OF TYPHOID FEVER.

By TURNER ANDERSON, M.D., Prof. of Materia Medica and Therapeutics, Univ. of Louisville.

From the *Louisville Medical News*, Jan. 3, 1885:—There is no disease which presents a greater variety of symptomatic phenomena or peculiarities than



typhoid fever. The first question bearing upon treatment, exclusive of questions of prophylaxis, is the importance of an early diagnosis, which should, if possible, be made without the aid of quinine.

Much of the subsequent muscular debility may be avoided by an early taking to bed, and the maintenance of the recumbent position throughout in a room the temperature of which is uniform at about 65° F. The general treatment may now be regulated by the stage of the disease and its character. Of the several septenary periods, the first week is the one of greatest discomfort and suffering, and frequently requires treatment even when the disease promises to be mild, for the relief of the one and only constant symptom of all cases, cephalalgia.

It is my habit to inquire carefully into the state of the alimentary canal, both its present and past condition for some time previous, as regards constipation. If the onset has been sudden, with high temperature from the beginning, constipation from arrested secretion is the rule, and I order one calomel purge; it has appeared to me to act better than anything else, and is selected only perhaps because it is the recognized cathartic fever. If the disease has been ushered in in the usual way by prodromes, and there is diarrhœa, or a tendency to looseness of the bowels, the purge is omitted, and subsequent constipation relieved by enema. Water, either acidulated or not, as the patient may prefer, is given as freely as desired at all times, and used externally by sponging, and as a means of applying cold to the head. To control headache I give opium and bromide of potassium.

I do not insist on the administration of much food; of course I use nutriment in a liquid form only, and give the preference to home-made animal broth and milk diluted freely with Vichy water. The soda of the Vichy acts beneficially in correcting the acidity frequently present, and I find the combination agreeable to most patients.

When the earlier stages of the disease have been passed in as comfortable a manner as possible, no effort having been made by the use of any specific medication looking toward an abortion of its duration, I fully recognize that the duty of the physician relates only to management with reference to a spontaneous termination. I therefore give no medicine, being content, in many cases, to rely on good nursing, plenty of water and limited quantities of liquid food, frequent change of body and bed linen, and absolute recumbency.

We recognize the disease as mild or severe in proportion to the elevation of the temperature; where the temperature is high for a long period great muscular debility is pronounced, and marked prostration results. For the management of a high temperature I rely on the external use of water as an antipyretic agent. I use the sponge-bath either with water alone at an ordinary temperature or, if much restlessness exists, with the addition of vinegar, directing the bath to be given at the time when the fever is ordinarily the highest, say 3 p. m. I have but little faith in the beneficial action of certain popular agents in use for the reduction of febrile temperature, such, for instance, as salicylate of sodium, quinine, etc. All cases do not, however, progress toward a favorable termination with these simple measures alone, and the physician can do more in the management of cases less favorably disposed to a successful termination. In these I am certainly fond of the use of certain medicines, and I would classify these agents according to my estimate of their value, as follows: (1) alcohol, (2) opium, (3) turpentine, (4) digitalis.

The first of these agents is given in the form of whisky combined with milk in definite quantities and at stated intervals. I rarely find it useful before the end of the second week, and am guided in its administration by the usual evidences of exhaustion and the ability of the patient to assimilate liquid food in sufficient quantities to sustain the organism. I have never found it necessary to use more than three ounces of alcohol in whisky *per diem*. Next to alcohol I regard opium of value; I use it in all stages of the disease to control sleeplessness, relieve discomfort, and, when but little food is appropriated, to sustain the system. I never allow my patient to suffer from insomnia.

Just here I may refer to the fact of which I am well aware, that bronchitis and pulmonary congestion are recognized contra-indications for the use of opium. Ordinarily and in primary bronchitis this I believe to be true, but occurring in typhoid fever, and associated with great cardiac weakness, its stimulating influence upon the circulatory system has seemed in many of my cases to counterbalance all injurious effects—contra-indications.

Turpentine is used for the relief of abdominal tympanites and as a cardiac stimulant and hemostatic in hemorrhage from the bowels. For the latter I use one single dose of a dessertspoonful and a full dose of opium. Digitalis is occasionally indicated to correct cardiac irregularity and intermittency of pulse, and has in these cases, where frequency of pulse, without other alarming coexistent symptoms, indicated great illness, done much good.

### ON THE DURATION OF CONTAGIOUSNESS AFTER ACUTE INFECTIOUS DISEASES.

By ALFRED LUDLOW CARROLL, M.D., Secretary and Executive Officer, State Board of Health of New York.

From *N. Y. Med. Jour.*, Dec. 6, 1884:—The only attempt within my knowledge to formulate experience in respect of the duration of infectiousness is that of Dr. Miller, of Dundee, whose tabulation is as follows:

Small-pox.....	14 days after termination of scabbing.
Typhus.....	28 days from inception.
Scarlet fever.....	7 weeks from inception.
Diphtheria.....	6 weeks from inception.
Whooping-cough.....	8 weeks from inception.
Measles.....	6 weeks from inception.

*Small-pox.*—As to small-pox, there is practically unanimity in regarding the danger as existing until all crusts are removed; but a few incline to prolong even further the period of isolation.

*Typhus Fever.*—In relation to typhus, there is less accord. One deems fomites the most important factor in the dissemination of the malady, while the rest lay stress on personal contagion. One regards it as "not contagious after a short interval;" a second advises segregation until repeated baths have followed the complete disappearance of the cutaneous exanthem; a third, somewhat indefinitely, would permit return to school "after complete recovery and disinfection."

*Typhoid Fever.*—Those who believe in the direct personal contagiousness of enteric fever are few in number, and I fancy that nearly all of us will agree that the intestinal discharges are all with which preventive medicine has concern. Whether these retain their infectious properties during the whole process of the malady is a question still in uncertainty, and rendered more obscure by the apparent demonstration that the disorder may, under certain undetermined circumstances, be generated *de novo* from ordinary sources of filth-poisoning. At all events, isolation of the person seems unnecessary as soon as convalescence is complete.

The same considerations will apply, I believe, to cholera, with the further remark that, if Koch's recent observations are correct, the germs of this disease appear to be shorter-lived than any other known species, being destroyed, not only by desiccation, but by the "scavenger-bacteria," which conquer them in the struggle for existence in the products of common decomposition.

*Diphtheria.*—Diphtheria affords a wider debatable ground. To begin with, there are many (among whom my own experience forces me to class myself) who assign the first place in the pathogeny of diphtheria to the filth-poisoning, and doubt its exceeding contagiousness. Of a number of persons exposed to the same pathogenic conditions, it is not surprising that several should succumb; but this is not convincing evidence of transmission from one to the other, and I have seen repeated instances where, despite intimate contact, the disease failed to extend after its introduction into places in proper sanitary condition. One of my correspondents, who has long had

charge of a large hospital for children, believes this malady to be "feebly, if at all, contagious," and finds it quite safe to remit quarantine "after the disappearance of membranes;" a practical sanitarian, of national reputation, excluding fomites and filth in air or water, does not believe in personal contagion; a distinguished teacher in one of our metropolitan colleges doubts "its communicability, except by contact;" another, equally eminent, declares that contagiousness endures until the last trace of inflammation or infiltration secondary to the diphtheric process has disappeared; a fourth would protract the duration of quarantine for a month, or, at least, three weeks, after all symptoms have abated, and would forbid return to school while any redness of the fauces or any coryza lingers. The discrepancy of opinions in this respect among the leaders of professional thought suffices to show the need of more definite data to guide our deliberations.

*Whooping-Cough.*—In pertussis, all opinions agree, save one, that contagiousness ends when the cough loses its spasmodic character, the single doubtful view being that, as the danger is wholly from the breath of the patient, it can not be determined how long the cough may convey infection. It should be remembered, however, that a few writers have expressed doubts of the contagiousness of pertussis in any stage.

*Measles.*—With regard to measles I find equal diversity of views. One regards its contagium as very volatile, not long adhering to person or clothing, and permits the return of the patient to school in two weeks after convalescence; a second would defer liberation from quarantine until a week, at least, after desquamation; a third releases the patient when desquamation has ceased, or, in cases where no desquamation occurs, after twenty-one days; a fourth fixes eighteen days; a fifth believes the danger past when the febrile stage and eruption are gone. The majority measure the time of isolation by the process of epidermal exfoliation.

*Scarlatina.*—In scarlatina, also, we have opposing opinions, ranging from that which considers it as a pythogenic disease, slightly, if at all, contagious from the person, to that which holds the infection to be communicable by the pulmonary exhalations, the blood, the naso-pharyngeal secretions, even the urine, as well as by the epithelial scales. One of my correspondents thinks the infection remains so long attached to the person that quarantine should endure for eight weeks; another cites an example of transmission after six weeks of isolation followed by a change of clothing; the rest concur in releasing the patient after desquamation has ceased and the surface been thoroughly cleansed. Most of us, I dare say, have adopted this "rule of thumb."

## THE TREATMENT OF ASIATIC CHOLERA IN SOUTHERN INDIA.

By H. M. SCUDDER, M.D., of Chicago, Ill.

From the *N. Y. Med. Jour.* :—The writer's mode of treatment was based upon nine years' practice in India, where he passed through four epidemics of the disease, in a city containing nearly 50,000 inhabitants.

For the purpose of treatment, he divided the course of cholera into the following stages:—(1) A period of prodromes, or prodromic stage. (2) A first stage, or stage of diarrhœa, or cholerine. (3) A second stage, or stage of invasion. (4) A third stage, or stage of collapse (algid stage). (5) A fourth stage, or stage of reaction.

This last stage might be succeeded by a typhoid condition, or cholera-typhoid state, or the patient might pass directly into a state of convalescence. In the prodromic stage, manifested by lassitude, mental depression, chilliness, nausea, and abdominal discomfort, give ten- or fifteen-drop doses of spirit of camphor, in dessertspoonfuls of hot brandy, every hour or two, but be careful not to allow any considerable quantity of stimulants to be given. When epidemic cholera was prevalent, many were affected by the symptoms just described. So soon as diarrhœa supervened, the administration of some preparation of opium, together with aromatics, camphor, and a little chloroform, was urgently called for. Thus, two parts chlorodyne to

one of spirit of camphor was a very good combination, thirty drops for a dose to be repeated as required. Another very serviceable preparation consisted of equal parts of spirit of chloroform, spirit of camphor, laudanum, aromatic tincture of rhubarb, and tincture of ginger—teaspoonful doses were to be given every hour or two, according to the urgency of the case, or until four or five doses had been taken, alternated with an aromatic-sulphuric-acid mixture which might be given to advantage. A popular form was the following: *R* Acid. sulphuric. aromat.,  $f\frac{3}{4}$  j; tinct. opii deodorat.,  $f\frac{3}{4}$  vi, *vel*  $f\frac{3}{4}$  j. *M.* Sig. 20 or 30 drops in water every hour or two.

He suggested the importance of administering these remedies hot, unless they created nausea. The patient should be required to lie down, and be kept perfectly quiet, covered with heated blankets, and dry heat should be applied to the surface of the body, especially to the extremities, by means of hot bottles, heated flat-irons, etc.

In India, the administration of calomel to any extent had lately been discouraged. One or two small doses might be given if thought best, but not more. So soon as frequent vomiting began, or the stage of invasion became established, the combinations containing opium which have been mentioned might be discontinued, and either of the following mixtures given instead, in teaspoonful doses at intervals after a spell of vomiting, while at the same time some morphine or morphine combined with chloral should be administered by hypodermic injection, as the severity of the case might demand.

*R* Chloroform, tinct. capsici, tinct. cannab. ind.,  $\mathfrak{aa}$ ,  $\mathfrak{m}$  xxx; acid. hydrocyanic. dil.,  $\mathfrak{m}$  xx; æther.,  $\mathfrak{m}$  viii; sp. menthæ pip.,  $\mathfrak{m}$  xv; syr. sassafras comp. ad  $f\frac{3}{4}$  j. *M.* Sig. A small teaspoonful every half-hour or hour. Or

*R* Sp. ammon. aromat., sp. chloroform.,  $\mathfrak{aa}$ ,  $f\frac{3}{4}$  j; tinct. capsici, tinct. cardamon. comp., tinct. zingiberis,  $\mathfrak{aa}$ ,  $f\frac{3}{4}$  ss. *M.* Give in the same doses as of the other.

A mixture of aromatic powder, gum arabic, and acetate of lead, might also be given alternately with either of these if desired. In any case, mustard plasters should be applied over the stomach and abdomen, but not left on too great a length of time, and, if required, an enema of eight or ten grains of acetate of lead might be given after each evacuation. It was important to bear in mind that some preparation of opium or morphine, or the latter combined with chloral, was the chief remedy for cholera, and the surest agent we could use to arrest the further progress of the disease. When called, therefore, to a case already in the stage of invasion, we should administer morphine, or morphine combined with chloral, hypodermically without delay, in order to get these sovereign remedies into the system as soon as possible. Caution must be exercised, however, when this form of treatment was pursued, for narcotism was easily induced by repeated hypodermic injections, whereas very large doses of opiates could be given by the mouth and rectum in this disease with comparative impunity. The solution usually employed for injection was, Morphine, gr. iijss. or gr. iv, with chloral hydrate, 3ijss. or 3iij to the ounce of water. Inject twenty or thirty minims. The hypodermic use of morphine and chloral was, of course, contra-indicated when the stage of collapse had become developed. During this stage it was most essential that the patient should be kept perfectly quiet and in the horizontal posture. No violent rubbings should be allowed, but it was beneficial to rub the limbs gently with hot oil. To allay the thirst, let the patient suck ice frequently. Carbonic-acid water or simple acidulated effervescing drinks might also be given by the tablespoonful. It was unsafe to allow the patient to drink any fluid whatsoever in large quantities. When the acts of vomiting and purging had become less frequent, and the algid state was well developed, very small quantities of stimulants were useful, but they should be given with great caution, lest vomiting should be provoked. Stimulant enemas might also be given, but, where the stomach had an inverted action, it was often better to inject small quantities hypodermically. Experience taught us, however, that anything like the free use of stimulants in cholera was uncalled for and exceedingly harmful. He had sometimes used small doses of atropine and strychnine by hypodermic injection, which proved apparently effectual in bringing about reaction. Intravenous administrations

of milk and salines might be resorted to, but the reaction they induced was not generally of a permanent character, so that many of those who had given this method a fair trial had abandoned it. Of late years, in Southern India, careful experiments had been carried out in reference to the value of impregnating the atmosphere of the sick-room with sulphurous acid by burning sulphur. The result had been that this procedure had been introduced as part of the treatment of cholera. He had on several occasions tried this plan, by subjecting the inmates of two different cholera sheds to exactly the same conditions and the same treatment in every respect, with the exception that in one the atmosphere of the shed was kept impregnated with sulphurous acid and in the other this precaution was omitted. He found that the proportion of recoveries was considerably greater in the sheds where sulphur was used. He, therefore, considered this an important adjuvant in the treatment. The atmosphere should not be so highly impregnated as to cause the patient or the attendants to cough violently. Sulphurous acid thus applied was not only a useful remedy, but it was also believed to decrease the liability of the disease being propagated or contracted by the attendants.

During the stage of reaction great care should be exercised. Liquid nourishment by the spoonful should be most cautiously given; well-salted broths and milk, given as hot as possible, and not too frequently, were the only forms of food admissible until the enfeebled stomach showed signs of recovering its tone. Peptonized beef-tea and milk were frequently well borne if carefully prepared, so as not to nauseate the patient. If vomiting persisted the following emulsion might be given:

R Acid. carbolic., gr. vii; bismuth. subnitrat., 3 ij; mucil. acaciæ, aquæ menth. viridis, ss, f ʒj. M. Sig. A teaspoonful every hour or two.

In this stage it was well to let Nature do the work of restoration, and give as little medicine as possible. The kidneys must be assisted to resume their functions, and for this purpose mild diuretics, such as nitrate of potassium, should be carefully administered. If fever supervened, it was apt to be of a typhoid character. A combination of iodine and carbolic acid then had a beneficial effect. A popular formula was the following:

R Acid. carbolic, gr. iijss.; tinct. iodin., gtt. xv; aq. menth. pip. ad f ʒiv. M. Sig. A tablespoonful every two or three hours.

To relieve restlessness and insomnia, bromide of potassium was often useful.

## THE CHOLERA AND ITS BACILLUS.

By L. BREMER, M.D., of St. Louis, Mo.

From the *Weekly Med. Review*, Dec. 6, 1884:—Of the various parasitocides that destroy the comma-bacillus the following may be mentioned. Alum kills it in a solution of one per cent., camphor 1-300, carbolic acid 1-400, oil of peppermint 1-2000, sulphate of copper 1-2500, quinine 1-5000 and bichloride of mercury 1-100,000. The last named, then, would be the most powerful of all disinfectants, though the practicability of its employment is to be questioned. Acids of all kinds are to be particularly recommended.

According to the experiments of Pasteur and Roux, the best and most reliable disinfectant for rooms is sulphurous acid obtained by the combustion of sulphur flowers impregnated with alcohol. From one-half to one ounce ought to be burned for every nine cubic feet of air. By this process not only were the cultivated microbes destroyed in the room, but the sulphurous acid was found to have penetrated the whole thickness of the mattresses. In order to protect the metallic objects in the room from the corroding influence of the gas it suffices to coat them with a layer of grease.

The prophylactic measures pertaining to personal hygiene may be summed up as follows:

The system ought to be kept at par, debauches of all kinds ought to be avoided, moderation in eating and drinking rigidly adhered to; all victuals, meat, fruit, etc., ought to be freshly boiled; also the drinking water; for a boiling temperature destroys the disease germs. Alcoholic excesses should be

above all avoided. The body linen of the choleraic patients when soiled should be burned or disinfected by one of the solutions above referred to. By boiling also it will be rendered harmless. Slightly acidulated drinks are, perhaps, also of prophylactic value.

As to therapy we have, as yet, not been benefitted by the discovery of the bacillus, opium, in various combinations, being still the sheet anchor in the treatment of cholera. Infusions of a  $\frac{1}{2}$  per cent. solution of common salt into the veins, to supply the lost water of the blood, and the incubator treatment during the stadium algidum, have signally failed. The most rational treatment according to the bacillary view would be to render the contents of the small intestines acid and thus deprive the parasite of the most essential conditions of existence. Whether this can be done, it is for the future to teach.

### SOME OBSERVATIONS ON THE USE OF THE HYDROCHLORATE OF COCAINE, ESPECIALLY ITS HYPODERMIC USE.

By J. M. DA COSTA, M.D., Prof. of the Theory and Practice of Medicine in the Jeff. Med. Coll., Philadelphia, Pa.

From the *Medical News*, Dec. 18, 1884.—Hydrochlorate of cocaine is a drug evidently of such power that, on reading the effects produced on the eye, I determined to investigate its properties in other respects, with a view of ascertaining whether it might be of use to the physician as well as to the ophthalmologist. I shall first detail some conclusions I have arrived at with reference to its local action.

On the *throat* it undoubtedly diminishes the sensibility, and is serviceable in causing the laryngoscope to be better borne. Moreover, it is of use in irritable relaxed throats, and in instances in which there is spasmodic difficulty in swallowing associated with this irritability, or from other causes. In ulcers at the back of the throat, connected with dysphagia, painting the parts two or three times daily affords considerable relief. Only for this to last, the solutions employed must be stronger than those which have been used—not from two to four, but from eight to twelve per cent. In tubercular laryngitis the action is excellent. Even a four per cent. solution gives hours of relief, in some cases as many as six hours' freedom from the sense of irritation and the difficulty of swallowing; and stronger solutions relieve for a longer time. The result obtained is far more certain and decided than from the local use of morphia. Compared with iodoform, it is probably less permanent, but as good, or better, at the time.

Dr. Jurist, at the throat clinic of the college, using chromic acid and the galvano-cautery frequently, found that, by first painting the parts with a four per cent. solution, the employment of these agents could be made comparatively painless, and that the efficacy of these, or indeed of all caustic and destructive means, is not interfered with.

In syphilitic ulcerations especially this was tested, and much suffering prevented. Where only four per cent. solutions are employed, the patient may not feel the caustic application to the abraded surface for about twenty to thirty minutes, but after this it becomes painful. All trials should be preceded by careful cleansing of the parts.

As regards the local use of cocaine on the other portions of the body, I am able to record some observations made in my ward at the Pennsylvania Hospital. In one instance pain in a hollow molar tooth was speedily relieved by inserting a piece of cotton saturated with a four per cent. solution. It may in passing be remarked that cocaine used hypodermically in the same patient failed to mitigate an attack of intestinal pain of colicky kind which had lasted for two days. A case of earache which seemed to be neuralgic was at once relieved by instilling a few drops of a four per cent. solution into the meatus; and a similar observation was made by the resident physician in the ward of my colleague, Dr. Hutchinson. As regards facial neuralgias, the results were less decisive than anticipated. In one instance of neuralgia of the face in which the pain shot into the jaws, painting the gums of the upper

jaw with a four per cent. solution, gave very speedy relief. Since becoming acquainted with the action of the remedy, I have had no case of rose cold or hay fever. But it ought to be of service, and I would suggest its employ in these most troublesome affections.

But what has interested me much about the drug, and what, so far as I know, has not been as yet investigated, is its hypodermic employ, elucidating its general action. In the observations I am about to detail, I have been greatly aided by Dr. Ecroyd, the resident physician in my ward at the Pennsylvania Hospital, and by Dr. Woodbury. No decided effects are produced with less than eight minims of a four per cent. solution, or one-third of a grain of the hydrochlorate of cocaine; and half a grain will show these effects even more strikingly. In some instances, two-thirds of a grain were used.

As regards the local influence at the point of injection, there is considerable difference whether a superficial or a deep hypodermic be used. A hypodermic thrown into the superficial layers occasions local anæsthesia, so that the part may be pricked with needles without these being felt. It is evident that if it be desirable to use the hypodermic means of producing local insensibility for the removal of small tumors and the like, a superficial injection immediately into or very close to the parts to be removed will have to be practised. The deeper injections do not produce local anæsthesia of the surface.

Now, as regards the *general* effect of hydrochlorate of cocaine hypodermically employed, it has a little, but not very much, influence on *sensation*. On the whole, there is some general reduction of sensibility, though it is not marked, and is transitory.

On the *temperature*, the effect is to heighten it somewhat.

The most striking effect of the hypodermic injection of cocaine is on the *circulation*. The pulse may be somewhat accelerated or slower; but it always becomes fuller and stronger.

On the *pupils* the influence is very marked. They become speedily dilated; and with the change, uncertainty of vision is complained of. The dilatation of the pupils, following the hypodermic injection, does not last more than a couple of hours, and during this period ophthalmoscopic examination is very easy.

On the *secretions*, I have not as yet fully studied the drug.

Summing up now some of the general effects observed, the drug, used hypodermically in the doses mentioned, failed to relieve attacks of intestinal pain, and was useless in cases of obstinate neuralgias, especially in sciatica. In certain very superficial neuralgias, its local action, not its constitutional influence, does temporary good. As an anæsthetic, its local action is the one which will give it its great value; and in diseases of the eye, ear, throat, tongue and nose, the insensibility to which it gives rise suggests a wide range of application. But this insensibility cannot be produced to a sufficient degree through the constitutional effect of a hypodermic.

The effects on the pulse and temperature recorded in these observations, suggest its application in many a condition of collapse, of weak heart, or heart failure; and its employ in low fevers, too, as a cardiac stimulant is a self-evident proposition. How permanent the benefit, how often the doses must be repeated, are matters which experience alone can determine.

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#### ADVICE TO A MEDICAL STUDENT.

An intimate friend of a young man, who has begun the study of medicine, writes the following letter which appeared in the *London Med. Times*:—

"*My Dear Boy*:—I am rejoiced to hear of your decision, and you may count on my doing everything in my power to help you, both now and hereafter. I make this promise with a light heart, for I am sure that a brilliant and clever fellow like you will turn out a credit to every one who has had anything to do with him. You must not forget, however, that genius has its special dangers and defects as well as its special facilities and advantages. And the study of medicine is a field in which the former are often more pro-

minent than the latter. Name and fortune are not to be made with us by a *coup*, as they may be in literature or commerce. I never remember to have heard of any one in our profession awaking to find himself famous, and if you have dreamed of such fortune pray dismiss it from your mind at once. Imagination and invention such as yours may have their full play in medicine—nowhere more so. Most of our great discoveries—Hunter's of tying arteries for aneurism, for instance—have been, so to speak, strokes of genius, but with us such strokes only come to those who have spent long years in observation and thought. They are like the blooming of the aloe. So my advice to you and to every other student of medicine is, 'Observe, observe.' Do not let yourself be discouraged by the idea that everything that is worth observing has been observed already. A fresh mind coming to a problem may see things that every one before has missed. Let me ask you, did they ever teach you at school or at college to observe a single thing but the meaning of a Greek particle or the value of a cosine? Your life has hitherto been spent among books, the study of which you have been taught to look upon as your end and aim. Henceforth you will have to regard books not as an end, but as a means, and often a very inefficient means toward the study of facts. What you read in them you will in nine cases out of ten be able, sooner or later, to observe and verify for yourself; and let me tell you that a fact personally observed is worth a hundred observed only vicariously. Do you remember our walk along the North Devon coast last summer? Possibly you forget, though, how I pointed out to you a hundred little sights and sounds of nature, while you were dreaming how to crystallize into a sonnet the vague impressions on you of the many-sounding sea. My boy, vague impressions and the conjury of sonnets and triplets have no place in medicine, and if you do not throw them aside or grow out of them no success will come to you in your chosen path. The truest success in medicine, the admiration of your contemporaries and of posterity, can only be gained by faithful observation of nature, and, if you desire those things, that is the faculty which you must cultivate and employ. I have spoken plainly, because with your splendid abilities you will be expected to do great things with us; but if you trust only to genius, and not to hard and energetic labor, you will find yourself at forty in a Bloomsbury garret, instead of, in those Elysium fields of the doctors—Brook Street and Cavendish Square."

#### RUSSIAN BATHS.

According to Dr. V. V. Godlevsky (St. Petersburg Inaugural Dissertation) (*Mod. and Surg. Reporter*, Jan. 17, 1885) Russian baths are indicated: (1) in chronic muscular and articular rheumatism, as well as in gout; (2) in secondary and tertiary forms of syphilis; (3) in scrofula; (4) in obesity, and in plethora from overfeeding and sedentary life; (5) in the initial stages of catarrh of the nose, throat, bronchi, lungs, bowels, and bladder; (6) in chronic catarrh of the external auditory meatus (as recommended by Dr. Strom), the pharynx, tonsils, and nose; (7) in chronic inflammation of the spinal cord and its membranes (as recommended by Bartels, Frey, and Heiligenthal), and in hypochondriasis; (8) in chronic congestion of the liver, spleen, stomach, bowels, as well as in the algid stage of cholera; (9) in rheumatic, scrofulous, and syphilitic disease of bones; (10) in intermittent fever (in the stage of rigor); (11) in apyretic cases of ascites and serous pleuritis, and non-cardiac dropsy; (12) in hydrophobia (Sanjez, Buisson, Turkish baths in hydrophobia were recommended by Dr. R. Neale); (13) possibly, in diabetes, as well as (14) in the cases where the formation of biliary and cystic calculi may be suspected.

The contra-indications for Russian baths are as follows: (1) all rather prolonged acute febrile diseases; (2) tendency to hemorrhage; (3) general weakness and exhaustion after acute diseases; (4) acute affections of the eye and ear; (5) uncompensated diseases of the cardiac valves, fatty degeneration of the heart, arterio-sclerosis of higher degrees, and aneurysm; (6) tend-



ency to pulmonary and cerebral congestion, plethora of higher degrees; (7) considerable emphysema, phthisis in the last stage; (8) obstinate constipation from atony of the intestines; (9) pregnancy with tendency to abortion; (10) very hot Russian baths are contra-indicated, also, in the cases of old people, and infants.

## DISEASES OF THE NERVOUS SYSTEM.

### PATHOGENY AND TREATMENT OF DELIRIUM TREMENS.

From an editorial in the *Boston Med. and Surg. Jour.*, Jan. 1, 1885.—The pathogeny of delirium tremens is still a matter of dispute—not that there is any doubt as to the principal casual factor, but there is not precise agreement as to the relationship of the toxic agent to the special phenomena of the disease.

In endeavoring to form a proper estimate of the pathogeny of this affection, and thus get hold of the rational indications of treatment, it will not do to lose sight of the prime fact that the disease is an acute epiphenomenon of chronic alcoholism, and that it depends essentially on blood poisoning by the fiery products of the still, being especially prevalent in countries where distilled liquors—in preference to the lighter fermented beverages—form the customary intoxicant. This being the case the leading indication must always be suppression of the cause. It would almost seem as though nature intelligently recognised this indication, and attempted to realize it in the loathing of liquor, which the drunkard at a certain stage experiences; if despite this loathing, he persists in imbibing the alcoholic potion, the stomach speedily rejects it by vomiting. And here is where the two views meet and harmonize. The man who is in a state of preparedness for delirium tremens is one whose nervous system is in a highly irritable, unstable condition from strong drink; he has for some time been unable to eat or digest, and has become further weakened in consequence; the time, moreover, has arrived when, owing to saturation of the system with the poison so that it will bear no more, he can take no more alcohol, and this is “the last blow that brings him down.” The issue may be precipitated by a traumatism, as a severe injury to the head, or a fracture, by its prostrating influence upsetting the nervous equilibrium even more than taking from the system the prop of alcohol could do. An attack of pneumonia, erysipelas, acute rheumatism, even severe mental emotion from business losses, disappointment, etc., any great physical or mental shock, may be the immediate antecedent, just as the snapping of the gun-lock causes explosion of the powder in the barrel.

The therapeutics of delirium tremens must recognize the poisoned state of the blood, the weakened state of the vital forces, and the perturbed, irritable, ataxic condition of the nervous system, which finds expression in the restlessness, agitation, and sleepless delirium, as well as in the tremulousness of the voluntary muscles. The first and most imperative indication is to stay the waste of nervous energy and nerve substance, which, if too long continued, may wear out the patient. Here is the principal danger of the disease. It is true that delirium tremens is a self-limited disease, as Dr. Ware a long time ago pointed out, and that the patient, if brought under suitable hygienic influences, will very often get well without medicine; it is no less true that the violence and duration of the disease may be very much moderated; that the attack may even (as there is reason to believe) be cut short by suitable sedative, anodyne, and waste-restraining treatment.

A judicious eliminative treatment should be carried out as opportunity offers; the action of the skin and kidneys should be favored by suitable diaphoretics and diuretics (ammonia, camphor, and salines); the bowels should be kept open by an occasional saline laxative. After all it is doubtless true that suitable nourishment is the best depurant, and that, as Perrie observes, “we cannot look for much improvement in the condition of the

sufferer till his blood has been freed to a certain extent from its poisonous ingredients, and made richer in quality by the persevering exhibition of proper food, and so rendered more suited for the purposes of nutrition."

### CENTRAL AND PERIPHERAL LOCALIZED PARALYSES.

By LAMBERT OTT, M.D., Instructor in Nervous Diseases in the Post-graduate Course of the Jeff. Med. Coll., Philadelphia.

From the *Medical Times*, Jan., 10, 1885.—Given a case of localized paralysis, by what points are we to distinguish whether it be central or peripheral?

#### PERIPHERAL PARALYSIS.

Generally unilateral, and situated in the distribution of an individual nerve.

Muscular atrophy.

Paralysis first, and atrophy follows.

Disturbances of sensation.

If of long standing, electro-muscular contractility absent, or the reactions of degeneration may be found.

#### CENTRAL PARALYSIS.

Usually bilateral when spinal, hemiplegic when cerebral.

No atrophy, unless multipolar ganglion-cells of anterior horns of gray matter are involved, and in those cases muscles are paralyzed which have different nervous supply, lying on opposite sides of the limb.

In progressive muscular atrophy there is also atrophy, but paralysis keeps pace with the atrophy.

Seldom marked disturbance of sensation.

Electro-muscular contractility only slightly impaired, except in infantile and adult spinal paralysis, where there is either lost electrical excitability or the reactions of degeneration; then the history of the cases is a guide.

Paralysis due to compression or inflammation of the nerve presents important differences. In inflammation we have pain or elicit pain on pressure, which is seldom the case in paralysis due to pressure; and, if decided pain is found, we may conclude that there is more or less inflammation. Peripheral palsies are due to various forms of pressure, such as inflammatory products, cicatrices, callus, tumors, passage of foetal head through pelvis, fœcal accumulations, muscular spasm, obstetric forceps, malposition of the extremities, and ill-fitting crutches. Where the pressure is temporary, at first both motion and sensation are affected, but the motor palsy lasts longer and is more profound.

Prognosis is generally favorable. Where the cause has been only temporary and the paralysis partial or complete, it will require six to eight weeks to effect a cure. In cases of paralysis with atrophy, the prognosis is not so favorable as to a complete cure, but the palsy may be improved.

*Treatment.*—If the palsy be due to an acute or chronic neuritis, rest, soothing applications, and the ordinary antiphlogistic course should be ordered. In chronic neuritis nothing will yield more charming results than blisters over the course of the nerve. Iodide of potassium internally also acts well. Electricity should not be used in acute neuritis. Should the muscles respond to the faradic current, gently faradize them three times weekly. If the muscles do not respond to this current, use the interrupted galvanic, placing that pole on the motor point of the muscles which obtains the minimum of contraction from the smallest number of cells. In compression-paralysis, if you find a spot of tenderness in the course of the nerve, use a blister. Otherwise nothing much can be done but to wait, keep up the tone of the muscles with electricity, and apply a constant descending current over the course of the nerve, in hopes of producing some healthy change in the nerve-structure itself.

## BRAIN-SURGERY AND VIVISECTION.

From an Editorial in the *Boston Med. and Surg. Jour.*, Jan. 15, 1885.—In our late editorial we said we were not aware that a *cerebral-tumor* had previously been removed.

The correspondence to which this late event has given rise has, however, developed the fact that Mr. Macewen, of Glasgow, has, within the past five or six years, twice successfully removed foreign growths, the position of which had been diagnosticated by means of the discoveries in cerebral localization to which we last week referred.

Mr. James Whitson, assistant surgeon to the Glasgow Royal Infirmary, in a letter to the *London Times* of December 28th, gives a brief sketch of these cases of Macewen's, and, besides them, of a number of others of localized abscess, effusion of blood, etc., which the same surgeon had diagnosticated and successfully treated by operation.

Even before Macewen, however, Broca (in 1871) and Lucas-Champonnière (in 1874) had successfully applied the principles of cranio-cerebral topography in operations upon cases belonging to this latter group (in the case of Broca pus was sought and found over the speech-centre), so that the interest of novelty really attaches to the removal of *tumor* alone. It may be of interest to recall that Dr. E. C. Seguin, in a paper published in the *Archives of Medicine* (volume viii., December, 1882), gives a thorough and careful statement of the lessons contributed to surgery up to that date by the physiological and clinical discoveries in localization, citing the two last-mentioned authors and others; and Dr. F. C. Fuller, in 1884 (*Archives of Medicine*, volume xi. page 262), reports four new cases of his own, besides analyzing numerous cases of other observers.

## REMARKS ON APOPLECTIC ATTACKS.

By PHILIP ZENNER, M.D., Cincinnati.

From the *Cincinnati Lancet and Clinic*, Dec. 20, 1884.—By apoplectic attack is understood a sudden complete or partial loss of consciousness, which is usually attended by paralytic manifestations. Sudden paralyses, without affection of consciousness, belong to the same category of symptoms, and are included here.

The causes of apoplectic attacks may, practically, be reduced to two, the rupture and the occlusion of blood vessels, or cerebral hemorrhage, and cerebral embolism or thrombosis.

Thanks to the researches of Charcot and Bouchard, cerebral hemorrhage is usually due to the presence of miliary aneurisms. There may be very few, or a large number, even hundreds of them, may be found in an individual case. They occur most frequently in the arteries supplying the corpora striata, and optic thalami, the localities where hemorrhage is most common. It was at one time thought that they were due to atheromatous changes in the arteries. But they are in reality due to a periarteritis (atheromatous changes are due to endarteritis). Atheromatous disease of the vessels is probably a factor in the production of hemorrhage only in a secondary manner, as is also true of cardiac hypertrophy, that is by increasing the blood pressure in the arteries, and thereby increasing the danger of rupture of aneurysms.

Cerebral embolism is usually due to valvular disease of the heart, and atheroma of the aorta, or large vessels at base of brain. Thrombosis is caused by atheroma of the cerebral vessels, or, less frequently, by the arteritis obliterans of syphilis. Embolism occurs most frequently in the left sylvian artery. Thrombosis, as it may occur in any diseased vessels, is found in various parts of the brain.

Embolism may occur at any age. Thrombosis, excepting when due to syphilitic changes, occurs chiefly in advanced life. The same is true of cerebral hemorrhage; for atheromatous disease of vessels as well as aneu-

rysms, is seldom found before forty years of age, and from that time occurs with increasing frequency with advancing age. Thrombosis doubtless occurs much more frequently than hemorrhage, for atheroma in the vessels is much more common than miliary aneurysms.

The symptoms produced by hemorrhage, embolism and thrombosis are so nearly alike that it is only by the consideration of other conditions, causes, etc., that an exact diagnosis can occasionally be made during life. Apoplectic attacks, when well marked, are so similar in their manifestations that it has been supposed that the lesion occurs almost always in the same part of the brain. But, in such cases, lesions in different parts of the brain will produce the same symptoms, for there is in their production a factor more important than locality, which we will learn in studying the immediate causes of the apoplectic attacks. We are indebted to Wernicke for the clearest, and, probably, correct explanation of these symptoms.

The brain substance is soft and normally under a very slight pressure, that equal to a column of water 10 millimetres in height. The blood pressure in the arteries of the brain, though differing, according to size and locality of vessel, may be said to equal that of a column of mercury 150 millimetres in height. When a vessel ruptures, this entire pressure may be suddenly brought to bear on the brain substance. On account of the yielding character of the latter, the effects of this sudden increase of pressure—of this blow, as it were—are conveyed to various parts of the brain, and thus deprive them of their functions.

In case of sudden occlusion of a large vessel, a similar effect is produced; but here it is due to a sudden negative pressure, instead of the sudden increase of pressure which occurs with hemorrhage.

The intensity of symptoms is dependent on the force of the blow, the latter depending on the size and rapidity of the hemorrhage, or the size of the occluded vessel.

Usually there is loss of consciousness; but, if the case does not terminate fatally, consciousness is restored, for there was only a transient injury of the larger part of the brain.

The result is different in cases of slowly developing coma. In such instances there is a slow hemorrhage, which does not set in with sufficient force to produce immediate symptoms in the manner above described, and only produces coma when the whole brain is compressed by a large effusion of blood. It is for this reason that slowly developing coma is so indicative of a fatal termination.

What has been said of the affection of consciousness is also true of other symptoms of apoplectic attacks.

#### DEFINITIONS OF INSANITY.

From the *American Psychological Journal*.—"A lesion of the intellectual faculties without pyrexia, and without coma."—*Cullen*.

"A prolonged departure, and without an adequate external cause, from the state of feeling and modes of thinking usual to the individual who is in health; also a morbid action in one, in several, or in the whole of the cerebral organs, and, as its necessary consequence, functional derangement in one, in several, or in the whole of the mental faculties which these organs subserve."—*Combe*.

"A disorder of the power of comparison of judgment."—*Connely*.

"A derangement of the mental faculties, morbid, apyrexial, and chronic, which deprives man of the power of thinking and acting freely as regards his happiness, preservation, and responsibility."—*Guislain*.

"A lesion in the association of ideas."—*Lélu*.

"The loss of the faculty of volition."—*Marc*.

"A cerebral affection, idiopathic or sympathetic, destroying the individual's moral liberty, and constituting a derangement of acts, tendencies, and sentiments, as well as a general or partial disorder of his ideas."—*Marek*.

"A deviation from or perversion of the natural or healthy state of the mind, as manifested either by the moral emotions and conduct, or by a

partial or general disorder of the intellectual powers and understanding."—*Marol.*

"Those states of disordered mind in which a person loses the power of regulating his actions and conduct according to the ordinary rules of society."—*Taylor.*

"A condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts have, separately or conjointly, been produced by disease."—*Bucknill.*

"The inability of the individual to correctly register and reproduce impressions (and conceptions based on these) in sufficient number and intensity to serve as guides to actions in harmony with the individual's age, circumstances and surroundings, and to limit himself to the registration, as subjective realities, of impressions transmitted by the peripheral organs of sensation, or the failure to properly co-ordinate such impressions, and to thereon frame logical conclusions and actions; these inabilities and failures being, in every instance, considered as excluding the ordinary influence of sleep, trance, somnambulism, the common manifestations of the general neurosis, such as epilepsy, hysteria and chorea; of febrile delirium, coma, acute intoxications, intense mental preoccupation, and the ordinary immediate effects of nervous shock and injury."—*Spitzka.*

"Madmen do not appear to have lost the faculty of reasoning; but having joined together some ideas very wrongly, they mistake them for truths, and they err, as men do that argue right from wrong principles."—*Locke.*

"An impairment of the mind, manifested by intellectual, moral and emotional perversion, and due to physical changes of the brain other than those temporarily produced by intoxicants or the poison of fevers."—*Hamilton.*

"Disorder of brain, producing disorder of mind; or to define its nature in greater detail, it is a disorder of the supreme nerve centres of the brain—the special organs of mind—producing derangement of thought, feeling and action, together or separately, of such degree or kind as to incapacitate the individual for the relations of life."—*Maudsley.*

"An individual is insane when the understanding is diverted or changed in its operations; when he is powerless to avail himself of his intellectual faculties, or to make known his wishes in a suitable manner."—*Hoffbauer.*

"A psychic manifestation of brain disease."—*Cruse.*

"A chronic disease, manifested by deviations from the healthy and natural state of the mind, such deviations consisting either in a *moral perversion* or a disorder of the feelings, affections and habits of the individual, or in *intellectual derangement*, which last is sometimes partial, namely, in *monomania*, affecting the understanding only in particular trains of thought; or general, and accompanied with excitement, namely, in *mania* or *raving madness*; or, lastly, confounding or destroying the connections or associations of ideas, and producing a state of incoherence."—*Pritchard.*

"In a person awake, a false or mistaken judgment of those relations of things which, as occurring most frequently in life, are those about which the generality of men form the same judgment, and particularly when the judgment is very different from what the person himself had before usually formed. There is generally some false perception of external objects; and such false perception necessarily occasions a delirium or erroneous judgment, which is to be considered the disease."—*Cullen (First Series).*

### DELIRIUM TREMENS.

By JAMES T. WHITTAKER, M.D., Prof. of the Theory and Practice of Med. and Clin. Med.,  
Med. Coll. of Ohio.

From the *Jour. of the Amer. Med. Ass'n*, Jan. 17, 1885.—It is generally pretty easy to recognize one of these cases, but every now and then a grievous mistake is made. Not infrequently an individual is picked up on the street, and perhaps carried to the station-house, thought to be suffering from delirium tremens, and it turns out afterward that he has had a sun-stroke, is apoplectic or uræmic, or has received a blow upon the head.

Then a man may have delirium tremens that is not due to the excessive use of alcohol. A man may show delirium and a tremulousness that is characteristic of the disease, in any acute infection, especially in typhoid fever and in septicæmia. Neither does alcohol give every man delirium tremens, or the affection would be a great deal more common than it is. It comes on, as a rule, after or in the height of a debauch. Acute alcoholic prostration is a quite different condition from delirium tremens.

It is a disease that is not so common in some countries as in others. It is most common in cold climates, as in Norway, Sweden and Denmark, because in these northern countries there is a constant craving for stimulating drink, not so much felt in warmer climates. In cold climates the tissues are consumed more quickly, and this accounts for the constant craving for alcohol. In warm climates, where wine and beer flow like milk and honey in the Promised Land, you will scarcely meet a case of delirium tremens.

Thomas Sutton, an English physician, was the first to give a distinct description of this disease. He taught us that there are three characteristic symptoms to be looked for, namely: delirium, tremor and insomnia. So it is sometimes said that delirium tremens is a disease which stands upon a tripod. There should be added a fourth symptom, a symptom which, however, is rather a negative than a positive sign. Delirium tremens is not accompanied by fever. When we find all these four symptoms present, delirium, tremor, insomnia and apyrexia we can have no doubt of the character of the case.

For the most part an individual who is attacked with delirium tremens has it come upon him suddenly. Not infrequently it is prefaced by or associated with nausea, vomiting, anorexia, etc., then the individual becomes delirious.

It is only a certain percentage of persons, as I have said, that have delirium tremens; and these persons are often victims of other neuroses. It is surprising how often *epilepsy* is associated with this disease. Westphal has shown us that 80 per cent. of these cases are epileptic before the disease comes on, and 30 per cent. are seized with epilepsy after it.

But there is no rule without exceptions. I have intimated to you that delirium tremens is a disease without fever. Now, fever is sometimes associated with it; but when this occurs the elevation of temperature does not belong to the delirium tremens proper; the fever is due to complications that are accompanied with fever. Perhaps the most common complication of delirium tremens is *pneumonia*. This is due, to a great extent, to the exposure to which drunkards are subjected. The individual in many cases, has fallen into a gutter, and has got wet, and a pneumonia supervenes. The pneumonia of drunkards is frequently a double pneumonia, and there is no pneumonia that is so fatal as a pneumonia during alcoholism. [It is also very frequently an apex pneumonia.—ED.]

Next in frequency to a pneumonia is a pleurisy; but a pleurisy runs, as a rule, a much more favorable course. What you will learn to watch for with much greater interest is a meningitis. This is the complication that makes the individual the victim of maniacal delirium. You would observe, in a case of this kind, fever, and a contracted condition of the pupils, instead of the dilatation that is usual in these cases. Above all things you would lay stress upon the fever. Now, because a man has a maniacal delirium, it does not imply that he has a meningitis, for an individual generally has maniacal disturbances in the excitement of his fear some time in the course of the disease. It is occasionally very difficult to restrain these cases of delirium.

Suppose, now, that you should see an individual lying in the street in an acute state of intoxication, or coma, and it should become a question to what the coma was due, how would you decide? Well, in an attack of opium poisoning, you would notice the pupils contracted down sometimes to a pin-point, but you must remember that when the stage of asphyxia comes on in opium, they sometimes dilate. Next you would have the respiration reduced probably to only four or six per minute. This slow respiration is characteristic of both affections, because both poisons affect the medulla, but it is more marked when due to opium. Thus, with the pulse, pupils and respira-

tion, you would draw a line between alcohol and opium, especially if you could get anything of the history of the case, or if you could detect an odor of either drug upon the individual. If you suspected uremia, you would at once draw some urine from the bladder and examine it for albumin. But many drunkards have albuminuria, and in such a case you could not distinguish the affection. As a rule, however, this complication does not cause any difficulty, and you could eliminate one or the other. Look for the dropsy of Bright's disease, especially under the eyes. As for injuries about the head, you would have to examine the head, of course. Most mistakes are made where the physician has taken it for granted that the case is one of alcoholic intoxication without examining properly. I know of nothing more humiliating to the physician than to make a mistake like this.

What will you do for a case of delirium tremens? It is not, as a rule, a dangerous disease. Most patients recover. When they die, they die of complications, or those slow changes that are brought about by the continued ingestion of alcohol. It is sometimes necessary to use restraint in these cases. You should use just enough force to keep the patient quiet, and not any more. If you have attendants enough, it is only necessary for them to watch beside the bed and to keep him from leaving it. It is more a matter of vigilance than of force.

Of remedial agents, the best is chloral, but to have success, we must give it in large doses. It is better to give it in one large dose, as forty grains at a time, than in repeated small doses. Chloral is preferred to other remedies because it does not interfere with digestion and does not leave any traces behind. But then there are certain contra-indications to its use. You could not give an old drinker chloral; the alcohol has already produced changes in the heart that you must watch. The heart has become fatty, and the aorta atheromatous. You detect these changes in the pulse or by putting the ear down over the heart. Many and many a drinker has been pushed off with a dose of chloral. What then, in a case in which you could not give chloral, would be the substitutes? The best substitute is opium. Opium was looked upon as the sheet-anchor in these cases until the discovery of chloral. You shall give it in the form of morphia in the dose of quarter or half a grain under the skin that it be not rejected, and watch the effects. The individual as a rule falls off into a sound sleep, but you would hesitate to give the remedy too frequently. You may have to repeat the dose once or twice until the patient gets a grain or more, but you would watch the effect closely; you would watch to see if the pupils were contracted. In a case where there was some sign of fatty degeneration of the heart, you would certainly put the patient under digitalis. Grade your dose according to the condition of the patient; sometimes you will have to give as high as a tablespoonful of the infusion every two hours. Then there is a remedy which you would have the patient use as a drink, and it is in a mild case almost a specific, namely, coffee; you would have the individual drink strong coffee. Let him drink it without any milk.

Binz found that coffee was an absolute antidote to alcohol, and that dogs saturated with caffeine could hardly be intoxicated with alcohol. So you would use coffee or caffeine, and you would recover your patient within the short space of twenty-four hours. Lastly, if you choose, when you are all through you may lay aside the role of physician and assume that of the preacher.

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## DISEASES OF THE ORGANS OF RESPIRATION.

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### THE ASPIRATOR IN PLEURAL EFFUSION.

By HENRY T. BOWDITCH, M.D., of Boston, Mass.

From the *Boston Med. and Surg. Jour.*, Dec. 11, 1884.—In the record of the First Annual Meeting of the New York State Medical Association (*Boston Medical and Surgical Journal*, November 27, 1884) I find that Dr. E.

D. Ferguson, of Rensselaer County, presented a paper on the Use of the Aspirator in Hydrothorax. He laid down the following propositions:—(1) Owing to the dangerous and often fatal results which he had seen produced by the aspirator by causing pyothorax, he now never resorted to it except when dyspnoea or other serious symptoms supervened." "(2) Dr. Bowditch had maintained that the aspiration should be continued until the patient complained of pain in the epigastrium or dyspnoea, but he (Dr. Ferguson) thought that it was much better that it should be stopped before this point was reached, as the occurrence of these signs indicated a more or less grave condition already. (3) He would advise that more than a pint of fluid, at the outside, should never be withdrawn at one time. (4) In the pelvic cavity much evil had resulted also from the too free use of the aspirator, and, on the whole, he thought the instrument had, perhaps, been productive of more harm than good."

Permit me to take issue upon these points, which, from the report in the *Journal*, were all that Dr. Ferguson presented in his paper.

First. Since 1850, when I first began to operate with Dr. Wyman's fine trocar and suction pump, I have had under my care two hundred and fifty-three patients, with pleuritic effusions which required operations to remove the fluid. Three hundred and ninety-five operations were done. The vast majority of these operations have been that of suction, as above named. In a certain number a permanent opening became necessary. In one, Eslander's operation of removal of portions of two ribs was performed with perfect success and complete restoration to health after four years of suffering from a fistulous opening into the chest. During this period of thirty-four years I have never met with "dangerous or fatal results consequent on the operation of suction." I have seen a case under the care of another in which a permanent opening was made *under etherization*. In this case the pulse failed twice during the operation; but full recovery to health was the final result. I believe the patient would have died if the opening had not been made.

Second. Doubtless I should have met often "with dangerous and fatal results" if I had pursued the course which Dr. Ferguson says that I recommend. Unfortunately Dr. F.'s assertion is incorrect. I do not maintain that we must draw until pain or dyspnoea occur but precisely the reverse, as my patients and students would admit. My method is as follows: I use, as at first, the finest trocar to which I have applied a suction pump. I prefer this apparatus to any "aspirator" with vacuum previously arranged, as in Dieulafoy's or any other method. I think I can by the pump, which I hold in my hand, more easily judge of the amount of force needed to extract the fluid, and can if I wish *instantly* stop all traction, whereas the knowledge is not given by the "vacuum" instruments.

Having pierced the thorax and arranged the suction, I say to the patient, "Tell me if you feel the *least* discomfort in any way, either pain or stricture or desire to cough. Tell me instantly;" and then I either wait a few moments and perhaps cautiously draw anew or I remove the trocar from the chest. I impress strongly upon the patient's mind that it is for his good to let me know the first moment of the *least discomfort*. During the operation I frequently repeat the question. By proceeding thus prudently and slowly I *never allow severe pain or dyspnoea to ensue*, and I do not recollect to have ever had "dangerous symptoms" occur.

Third. Dr. Ferguson would never take more than a pint of fluid at an operation. He would also wait before tapping "until dyspnoea or other serious symptoms" occur. Pray what would be advise in cases of *latent* effusions, when one side of the chest may be full of fluid, and the physical signs alone indicate the condition of things? His rule of delay till dangerous symptoms set in might lead either to sudden death from obstruction of the heart or to long disease, terminating fatally. Such cases I saw repeatedly before 1850. I begged medical men to operate in the cases under their charge, and they would not, leaving death as the result.

In case I find now a chest full or nearly full of fluid, even if there be no severe dyspnoea, if the patient has been ill a month or six weeks I advise



tapping as the *first* remedy. I afterward use the common remedies, internal and external, for pleurisy. Having commenced the operation I draw from one to four, or once even five, pints, always watching, especially after two pints have been drawn, the condition of the patient, as above named.

Fourth. Dr. Ferguson said also that the instrument had been used much too freely in the pelvic cavity, and has done much evil there. I am not sure that I understand aright when I say that his words seem to intimate that "on the whole" the aspirator as generally used has done "more harm than good" wherever used. If he means that assertion as applicable to the thorax, I deny it wholly. It has been of infinite service to mankind, and will ever continue to be such. It will eventually save lives which, without it, will be lost. All that is required is that due care govern the use of it.

### THE EVOLUTION OF THE TREATMENT OF EMPYEMA.

From an editorial in the *Boston Med. and Surg. Jour.*, Jan. 1, 1885.—From the earliest times empyemata were opened occasionally, but at so late a period in the course of the disease that recovery can seldom have been more than partial. Until Auenbrugger and Laennec taught us how to distinguish accurately between affections of the lung and of the pleura at the bedside it may be said with truth that the lot of the possessor of a purulent pleural effusion was a hard one. For many years later, indeed, the evacuation of pleural effusions by the trocar or knife being practically considered unwarrantable, save as a last resort in desperate cases.

The next great step in advance was taken on this side of the Atlantic, when Bowditch showed that fluid can be withdrawn from the chest with ease and safety at any stage of the disease, and that the danger of wounding the lung, diaphragm, or liver could be disregarded. The aspirator was then improved by Dieulafoy, and it was gradually ascertained that, while with the aid of that instrument we had gained the mastery over the great majority of cases of serous and sero-fibrinous effusion, the simple operation was rarely of more than mere temporary service in empyema except, perhaps, in children. It was then more clearly seen that an empyema must be treated like any other abscess, by free incision, and the advantages of an early operation were more and more appreciated, the antiseptic method and thorough drainage contributing materially to progress.

Already more than twenty years ago Roser suggested the excision of a portion of a rib in order to obviate the difficulty often met with in keeping the fistula open, owing to the approximation of the ribs in the process of contraction of the chest; and, with the same end in view, Langenbeck revived the operation said to have been done by Hippocrates of boring through a rib, but with the comparatively modern instrument, the trephine. It was found that no bad results followed these operations on the bone, and Estlander was led to reason that if a portion of one rib can be removed without ill consequences, several could be treated in the same way, and then the permanent closure of intractable empyemata be brought about. Putting his idea into practice, the latter observer found that it stood the test, and the thoracoplastic operation, or the excision of ribs in such number and extent as may be required to bring the chest walls and remains of the lung in apposition, is the last great advance which has been made in the treatment of interthoracic effusion.

### DRAINAGE-TUBES ACCIDENTALLY LOST IN THE PLEURAL CAVITY IN CASES OF EMPYEMA.

By F. HUBER, M.D., Clin. Assistant, Diseases of Children, Coll. of Phys. and Surgs., New York.

The writer closes a paper published in the *Medical Record*, Jan. 3, 1885, with the following resumé:

The simple methods should be resorted to first. If we are fortunate enough to see the case within a short time of the accident, before the position of the tube has been changed by cough or other movement, we may succeed in seiz-

ing the tube with forceps introduced into the wound. If the orifice be too small to admit the forceps, use a sponge-tent or dilator. In using the tent we must bear in mind the possible existence of a bony bridge of union between the ribs in chronic cases, the tract passing through an osseous ring. The attempt to enlarge such a sinus by means of a sea-tangle tent necessitated the removal of a portion of two ribs in a case reported by Godlee (*"Annals of Anatomy and Surgery,"* July, 1888). In order to gain the "required sense of touch" it is advisable to pinch an india-rubber tube with forceps, before blindly searching the cavity.

If we fail after passing forceps of various kinds into the thoracic cavity in different directions, the patient should be placed in the horizontal position, the fistulous opening being most dependent, and then search again with forceps, bent probe, etc. This not succeeding, inject the cavity with water, in the hope that the return stream will carry the tube into the vicinity of the opening.

These means proving unsuccessful, the orifice should be enlarged with a knife so that the finger can be introduced. If the space be still too small, a portion of a rib must be removed in order to accomplish our object.

In conclusion I would add, if an ordinary tube be used, thorough measures should be observed in order to avoid any accident. Poor material should be discarded; subject the tubing to the proper test—"it should bear being tripled in length without breaking" (Nicaise, *Revue de Chir.*, December, 1881). Inefficient means should be avoided. A strip of plaster, a pad of oakum, or other dressing will not answer. If the patient be permitted to introduce the tube, warn him of the attending danger, and instruct him how to fasten the tube in a proper way. Remember that the silk threads attached to the tubes have been broken more than once. The safety-pin may cut through the rubber in other instances. The tube of Baxter, recommended by Godlee and Pilcher, is so simple, readily made, and safe, that I would insist upon its use in all cases. "A round hole is first cut in a piece of red india-rubber sheeting one-twelfth of an inch thick, and about one and a half to two inches square. A tube of the size required, and without holes, is then slit at one end into four pieces, which are drawn through the hole in the flat piece of rubber, turned down and fixed in position by stitches of fine silver wire." The tube should be just long enough to project into the chest cavity—one and a half to two inches—according to the thickness of the chest wall. Nothing is gained by curling up an enormous length of tubing in the chest.

## HEREDITARY TRANSMISSION OF PULMONARY CONSUMPTION.

By JOHN L. DAVIS, M.D., Cincinnati, O.

From the *Cincinnati Lancet and Clinic*, Jan. 24, 1885:—In view of the immense mortality from pulmonary consumption it is not only interesting, but it is of vital importance to learn, if possible, in how far the disease is hereditary and what proportion is acquired; for this knowledge is necessary to insure rational and effective treatment, particularly with reference to prevention.

With the hope of a better understanding of the influence exerted by heredity, I have carefully collected and analyzed a thousand cases in which reliable family histories were given. The large majority of these cases were taken from the medical records of the Cincinnati Hospital, and my inquiries were limited to the parents, brothers and sisters of the patients. About one hundred of the cases were obtained from private sources. The cases are reliable and valuable as far as they go; but, it must be borne in mind that the more remote ancestors, the collaterals and the descendants often give a clue to the existence of a case of phthisis in a family which is otherwise inexplicable. The parents, brothers and sisters may be apparently healthy, and it is only by extending our research farther that we may discover a suspected family taint.

In this investigation many such cases have come to my knowledge; but no account has been taken of them in this analysis. Since a complete investi-

gation would involve not only the immediate relatives, but collaterals, more remote ancestors and descendants as well, the tables which I present show a much smaller proportion of hereditary cases than they otherwise would. Therefore I believe that if this investigation could have been comprehensive enough to include the more remote relations of the patients,—who were of a class unable to give full family histories—the proportion of inherited cases would be greatly increased, probably as much as 50 per cent. On the other hand there is a possibility that some of the relations whom I have classed as consumptives, in reality died of some other disease. But from a considerable experience in life insurance, I am convinced that many persons die of consumption, while the cause of death, for various reasons, is reported to be something else. I believe, therefore, that the tables show a rate of hereditary transmission which is rather too low than too high. Of the thousand cases 700 were male and 300 female.

Of the males 52 per cent. were non-hereditary and 48 per cent. hereditary cases. Of the females 84.8 per cent. were non-hereditary cases and 65.7 per cent. hereditary cases. The average of all the non-hereditary cases was 46.7 years; of the hereditary cases 58.8 years.

It must be borne in mind that in this paper the term hereditary applies only to those persons who had a parent, brother or sister affected, and all others are classed as non-hereditary.

From this it will be observed that acquired consumption, as compared with inherited consumption, occurs more frequently among men than women. In the general average, there is a preponderance of hereditary over non-hereditary cases amounting to about 8 per cent.

The second table shows, first, of 1,000 patients suffering from pulmonary consumption 485 had phthisical parents; and in 67 instances *both* parents were consumptive; that is, about one-fourth of the parents of consumptives are themselves consumptive.

In the second place the table indicates that mothers are much more liable to have consumption than are fathers, and this preponderance is equal to 45 per cent. This is a much greater difference than Sieveking and other writers show for the two sexes.

Thirdly, both with sons and daughters, mothers transmitted consumption oftener than did fathers, there being no material difference between the proportions in the 700 male and the 300 female cases. This result is in striking contrast with the statement in Quain's Dictionary, "that when only one parent is affected, the father is more apt to give the disease to sons, and the mother to daughters." This statement is based on the first Brompton Hospital Report.

Table number three shows the number of patients having brothers or sisters affected with consumption. Here, contrary to usual experience, we find almost an equal number of brothers and sisters affected with consumption; it is asserted that daughters are from 15 to 20 per cent. more likely to inherit the disease than are sons; but this table shows no difference in this regard; of the 1,000 patients 13 per cent. had brothers and 13.2 per cent. sisters suffering with phthisis. The total shows that over 26 per cent. of all the number had either brother or sister consumptive.

### HYDROCHLORATE OF COCAINE IN LARYNGEAL PHTHISIS.

By GEORGE M. LAFFERTY, M.D., Prof. of Laryngoscopy and Diseases of the Throat in the Coll. of Phys. and Surg., New York.

From the *Medical News*:—All who have had any experience in battling with that most dread symptom of advanced laryngeal phthisis—the terrible dysphagia—will welcome any means which promises to give even temporary relief to the patient. Such a means we have in the much-lauded cocaine.

In a large series of cases the results have always been the same. One case, as an illustration, will answer my purpose. In a patient, the victim of advanced pulmonary and laryngeal phthisis, one in whom the act of deglutition had been an absolute impossibility for one week on account of the acute

pain that it caused, together with the immediate reflex spasm and rejection of the smallest amount of fluid nourishment on any attempt at swallowing, so that the patient was slowly perishing, in reality, more from hunger and thirst than from his disease, one application of the cocaine so anæsthetized the acute sensibility that a full glass of milk was immediately drank with ease and entire comfort. Each subsequent application in his case, as well as in many others equally well marked, has produced the same results, and, I may add, has notably relieved the element of dyspnœa.

The application of the cocaine (a four per cent. solution) was preceded in each case by a thorough cleansing of the mucous surfaces and all ulcerated points of the larynx from thick, tenacious muco-purulent discharges by the spray-application of an alkaline solution (Dobell); the parts were then immediately bathed gently, yet thoroughly, by means of a large laryngeal brush fully charged with the cocaine solution. One such application answers the desired purpose.

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### HAY FEVER AND ITS SUCCESSFUL TREATMENT.

By CHARLES E. SAJOUS, M.D., Lect. on Laryngology and Rhinology in Jeff. Med. Coll., Philadelphia.

From the *N. Y. Med. Jour.*, Dec. 6, 1884:—As a *résumé* I would submit the following:

That hay fever is an idiosyncrasy existing in certain individuals, to become influenced by certain emanations or irritating substances.

That the idiosyncrasy is accompanied by a chronic hyperæsthesia of that part of the nasal mucous membrane covering the inferior and middle turbinated bones, the middle meatus, the floor of the nose, and that part of the septum below the limit of the olfactory membrane.

That organic alteration of those parts annuls that hyperæsthesia, preventing at the same time what symptoms the patient may be liable to in the course of an access.

That any destructive agent will induce that organic alteration, but that the galvanic cautery is by far the best, being painless, effective, and devoid of all danger when used in practiced hands.

That, in order to obtain a satisfactory result, a sufficient number of applications must be made, covering the entire extent of the over-sensitive surface, without which the result will doubtful.

Now, gentlemen, permit me to state, in conclusion, that prior to last Saturday, and *after this paper had been written*, I knew nothing of Dr. Roe's (of Rochester) theory of hay fever, his method of treatment, and his results. The contribution I have just had the honor of presenting to you embodies precisely those views, and the results shown indicate evidently that the theory is the true one.

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### THE CURE OF ASTHMA.

By RICHARD B. FAULKNER, M.D., Pittsburg, Pa.

From the *Medical Record*, Jan. 24, 1885:—I understand by the term asthma the condition of spasm of the bronchial tubes of both lungs, with hyperæmia approaching or amounting to inflammation, accompanied by râles upon both inspiration and expiration, with great difficulty of breathing. And the term is applied to the paroxysm alone, which returns at regular or irregular periods. Disturbance of function or disease of structure of the pneumogastric nerve is always present.

To cure the paroxysms I originated a method of treatment nearly five years ago; and repeated observation has confirmed its great utility. When called to a case of asthma, with a camel's hair brush I make a streak of Churchill's iodine over each pneumogastric nerve, in its course in the neck, from the upper part of the thyroid cartilage to the upper borders of the clavicles. By counter-irritation thus applied, the capricious and abnormal exercise of nerve-force by the pulmonary filaments is controlled, and bronchial spasm promptly

relinquished. Such is my original method—simple, certain, quick. Churchill's tincture is the best counter-irritant, because, first, it is convenient; second, its action is easily controlled; third, it does the work. To permanently cure the paroxysms, it is usually necessary to remove the underlying morbid condition upon which they depend or are associated.

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#### INOCULATION OF TUBERCLE IN THE HUMAN SUBJECT.

From an editorial in the *Medical Record*, Feb. 14, 1885.—The number of successful experiments made upon the lower animals to demonstrate the inoculability of tuberculosis is so large as to leave no doubt concerning the fact that the disease can in them be so transmitted. While as regards man, the evidence of clinical experience in favor of the theory of contagion is sufficient to convince most minds, there is, nevertheless, no such overwhelming proof of this assumption as exists in the other case. Important evidence seems now to have been supplied by Dr. E. A. Tscherning, of Copenhagen, in a case related by him in the *Hospitals-Tidende* of December 17, 1884. The subject of the report was a young woman, twenty-four years of age, employed as cook in the family of a certain Professor H. She was a strong healthy girl who had never had a suspicion of any scrofulous or tuberculous affection, and who gave an unexceptionable hereditary history free from the slightest taint of tuberculosis. Professor H. died in July of last year of pulmonary phthisis, after an illness of only five or six months' duration. Toward the close of his life the sputum, it is stated, was so loaded with bacilli as to constitute almost a pure culture of these organisms in pus. A few days before her master's death the cook broke a glass which the patient had used to expectorate in, and ran a small sliver into her left hand, receiving a punctured wound on the palmar surface of the first phalanx of the middle finger. Fourteen days later she presented herself at Professor Studsgaard's clinic with what seemed to be a commencing felon. There had been no suppuration. But at this time a little nodule, scarcely half as large as a pea, was felt in the subcutaneous connective tissue. During the following week this remained stationary in size, but became somewhat tender and was surrounded by an oedematous area. The nodule was now excised, and was found to consist of granular matter lying between the sheath of the tendon and the skin. The wound healed by first intention.

At the beginning of October the patient again presented herself, complaining of pain on flexing the finger. The subcutaneous connective tissue on the palmar surface of the hand, as well as of the affected finger, was swollen, but no distinct tumor on the sheath of the tendon was discoverable. A month later, however, a distinct thickening of the sheath of the tendon was to be felt. Two cubital and two axillary glands were also enlarged. Professor Studsgaard disarticulated the middle finger at the metacarpo-phalangeal joint, and dissected away the tendon with its thickened sheath as far as the middle of the palm. The swollen glands at the elbow and in the axilla were also removed. Examination showed the sheath of the tendon filled with pale granulations. No pus nor cheesy matter was to be seen, nor was there any disease of the bones or joints of the amputated finger. The granulations, hardened in alcohol and stained with picrocarmine, when placed under the microscope were seen to be composed of tubercles, with, in some cases, central caseous degeneration, numerous large cells, and many beautiful, in part, central giant-cells. The extirpated glands looked to the naked eye as simply hypertrophied, and free from pus or caseous matter. Under the microscope large-celled hyperplasia, and here and there isolated tubercles were found. In every section, either of the sheath of the tendon or of the lymphatic glands, numerous tubercle bacilli were seen lying either in the giant-cells or at the edges of the microscopical points of necrobiosis. The bacilli were usually isolated, but here and there two or three were found together; in many cases they were seen to be provided with so-called spores. These appearances, Dr. Tscherning states, were the same as those observed by him in upward of thirty other cases of localized tuberculosis.

## DISEASES OF THE ORGANS OF CIRCULATION.

## INORGANIC HEART MURMURS.

By CHAS. W. MITCHELL, M.D., of Baltimore.

From the *Maryland Medical Jour.*, Dec. 20, 1884.—The frequency with which abnormal heart sounds are heard during life without the autopsy revealing any adequate cause therefor, renders a consideration of the subject perhaps not untimely.

These murmurs have certain definite characters. They are always systolic, never diastolic. They are of a soft blowing nature. Their intensity varies greatly, keeping pace with the general condition of the individual; and they disappear altogether upon complete return to health. They are heard at the pulmonary ostium and in the mitral region, and very frequently about midway between these two areas; that is, at a point a little to the left of the sternum, about on the level of the fourth rib.

What is the condition of the heart muscle in the diseases giving rise to these murmurs? Evidently one of mal-nutrition. The tone produced by the systole under such circumstances must differ from the normal. Post-mortem examinations in infectious diseases frequently show the heart to be in a state of cloudy swelling or even of fatty degeneration. Perls, by oft-repeated venesection, produced fatty degeneration of the heart. The integrity of the cardiac muscle may, however, be very seriously impaired before these changes occur.

The other element in the production of the normal heart sounds, is the valvular. Any alteration in the tension of the valves is bound to be accompanied by a change in the sound produced by their action. Can such alteration be induced by deficient nutrition of the heart? The tension of the auriculo-ventricular valves is maintained by the circular fibres around the orifices, and by the muscoli papillares. Now it is well-known that the last named muscles suffer very early in the course of degenerative changes affecting the heart, and owing to their weakened or incoördinated contraction the tension of the valve is so altered as to produce a murmur. Examples of murmurs produced by incoördination of these muscles are often met with in chorea, in cases in which there has been no antecedent rheumatism, and in which the most careful examination gives no evidence of organic cardiac disease.

The cardiac endothelium also is also apt to suffer under circumstances giving rise to inorganic murmurs, and such changes as a very slight roughening of the endocardium may be factors in the production of the abnormal sounds.

To Conheim belongs the great credit of having been the first to insist upon the pathological significance of changes in the blood-vessel walls. Before his day, undue prominence was given to alterations in the blood itself. It was under the influence of the old teachings that inorganic murmurs were explained in all cases by the supposed watery conditions of the blood; and the fact that a badly nourished muscle performs its work badly was entirely overlooked. Here, as in the process just mentioned, undue stress was laid upon slight changes in the specific gravity of the blood.

If these murmurs depend upon watery blood, why are they never diastolic? They are only heard when the heart muscle is contracting. The fact that they are heard most frequently at a point midway between the valves seems also to point to a muscular origin. Skoda, who, perhaps, did more than all others to establish auscultation and percussion on a purely physical basis, states that a mere watery condition of the blood cannot account for these murmurs.

These murmurs being met with under a great variety of circumstances, the recognition of their true nature becomes a matter of importance. Much harm has been done by basing the diagnosis and prognosis upon the murmurs alone, which should be looked upon as indicative rather of the general state of bodily nutrition than of any special condition of the heart.

Inorganic murmurs may coexist with valvular disease. It is well known that in persons suffering with valvular lesions, the existing murmurs are always intensified when the nutrition of the body is depraved, and became less marked as the general health improves.

An individual may become anæmic, suffer from shortness of breath, have some palpitation, may even have slight hydræmic dropsy. The practitioner hearing a systolic murmur, attributes it to mitral regurgitation or pulmonary stenosis, and regards the dropsy and general anæmia as due to the valvular lesion. The patient leaves the doctor, much depressed by the gloomy prognosis. He puts himself, however, under favorable hygienic circumstances, his appetite returns, his muscles, heart included, become braced up, and his systolic murmur gradually disappears, much to the surprise of his medical attendant.

### MARRIAGE AND MITRAL STENOSIS.

The *Medical News* tells us that in a recent clinical lecture at la Charite, Dr. Landouzy stated that the mitral orifice is anatomically narrower in women than in men. On the other hand, the hyperalkalinity of their blood leads to sclerosis. These conditions explain the frequency of mitral stenosis in woman. Nevertheless, as long as the left auricle, says the *Journal de Médecine*, remains in good condition, the primary lesions makes but little progress; but when the great vital test of pregnancy comes, there is danger.

Porak's statistics show that in gravidocardiac disorders, as they are called, more than two-thirds of the cases are those of mitral stenosis, mitral insufficiency or the two combined. Obstetricians are agreed in advising that a woman suffering with mitral disease, especially mitral stenosis, should not marry; or, being married, should not have a child; or, having given birth, she should not nurse. A woman with mitral disease having been married, and becoming a widow without having borne child, is in a most favorable condition if she remains content with widowhood.

Landouzy mentions the case of a girl who had been in the hospital under his care, and whom he had advised not to marry, but who disregarded his advice, married, became pregnant, and after a miscarriage, died suddenly in an attack of a systole.

The editor of the *Amer. Med. Digest* comments upon this as follows: "Of course, in cardiac disease, it is well to discourage marriage; but, in regard to such action, the old fable of Cupid being blind has countless illustrations, and at the bridal altar these very maidens, like other brides, deck themselves with orange flowers, the very symbol of fecundity—whether they know this or not—when they ought not to have a single pregnancy. But, when married, they are advised not to have children. How many women can control this matter? To avoid reproduction is very easy to advise, very difficult to do. Possibly, it might be well to counsel these cardiopathics to prepare for marriage by first undergoing Battey's operation. But when the wife is not sterilized in advance, a similar proposition might be made to the husband; and in the day when our gentle sisters become professors of diseases of the male sexual organs, possibly normal orchidectomy may occupy as important a place in the surgical therapeutics of man as normal ovariectomy now does in the diseases of woman. However, we are not sanguine that either plan of treatment for the prevention of pregnancy will be adopted; but we are inclined to think that germicide solutions may continue to be in demand by cardiopathic wives.—*Weekly Med. Review*, Jan. 17, 1885.

### PERNICIOUS ANÆMIA.

By GEORGE B. SHATTUCK, M.D., Visiting Phys. to the Boston City Hospital.

From the *Boston Med. and Surg. Jour.*, Jan. 1, 1885.—The only features at variance in this case with a typical picture of so-called pernicious anæmia are the emaciation, the recovery, and the absence of loud cardiac bruits. Emaciation is common in simple anæmia; all writers except Quincke agree that it is the exception in the pernicious form. The same is true of recovery. Quincke claims ten recoveries out of thirty-one reported cases, S. Laache five

recoveries out of eleven very characteristic and carefully recorded cases. Loomis (1884) says death occurs in ninety per cent. of all cases. Bartholow (3d edition), who is the reverse of a therapeutic nihilist, closes his few remarks on treatment thus: "Unfortunately, hitherto no results have followed the treatment and the cases have pursued their evil course until the end." Flint (5th edition) says truly: "The prognosis is affected materially by the latitude of the signification of the term pernicious in this application of it. If a fatal termination be essential for the disease to be considered pernicious, of course there is no possibility of recovery. This is an extreme view. . . . Cases have been reported presenting the requirements for the diagnosis of pernicious anæmia in which recovery has taken place."

There was evidently something in this case more than a simple anæmia, and something different from chlorosis; the absence of extreme splenic enlargement, of all glandular enlargements, and of any marked change in the proportion of white corpuscles in the blood, declare against leucocythæmia, and the absence of glandular hypertrophies against pseudo-leukæmia. The oligocythæmia, or diminution of red corpuscles, was as pronounced as is often reported, and is not far removed from Hayem's extreme limit, placed at 450,000 to the cubic millimeter.

Biermer, of Zurich, first used the term progressive pernicious anæmia, to describe fifteen fatal cases which came under his notice at Zurich, between the years 1867-71; Gusserow published, in 1871, an account of five similar cases of "extreme anæmia in pregnant women," also observed at Zurich.

In pernicious anæmia the number of red globules is probably invariably diminished to a striking degree, unless one was willing to admit with Quinke what he calls a "transition stage." The condition of the red globules is characterized in general, according to that observer, by extraordinary varieties in form and size, which he terms *poikilocytosis*. He found these changes well marked in twelve cases, indicated in two, absent in one. Such changes are certainly not constant, and not pathognomonic.

The latest contribution to the pathology of pernicious anæmia is that of Sasaki, who, while carefully studying the intestines from fifty autopsies, met with those from two patients dying from this disease. In these he detected certain marked changes in Meissner's and Auerbach's ganglionic plexus throughout the intestines.

Lépine distinguishes three forms in regard to origin: A splenic and medullary form; gastro-intestinal; that occurring during pregnancy.

Sasaki, following Lépine, regards his two cases as belonging to the gastro-intestinal variety, and draws the following conclusions, which I take from Dr. W. F. Whitney's abstract of his paper: (1) It is highly probable that the gastro-intestinal form of pernicious anæmia may be produced by recognizable anatomical lesions in the intestine. (2) Pernicious anæmia can be caused by an atrophy of the intestines. The correlated change in the nervous apparatus coming under the class of parenchymatous degeneration. (3) In the affection of the intestine which is not diffuse, and does not extend over a large area, the changes in the plexuses are restricted in a corresponding manner.

Should these two observations of Sasaki's be supported by others it seems to me that, in regard to one class of these cases, we may look upon ourselves as initiated into a little higher degree of the mystery; and instead of expressing our ignorance in terms of a mysterious change in the red blood corpuscles, we may then express it in terms of a mysterious change in the intestinal nerve plexuses.

The phrase "progressive pernicious" is mainly objectionable if it is supposed to imply a necessarily fatal termination; the term "idiopathic" ceases to be applicable as soon as we get some clear idea of the cause or causes which undoubtedly exist.

#### ATHEROMA OF THE CORONARY ARTERIES.

From an editorial in the *Jour. of the Amer. Med. Ass'n*, January 10, 1885.—The anatomical character of this disease, as manifested in the nutrient arter-



ies of the heart, and the serious changes in the cardiac muscles which result therefrom, have been forcibly described by Prof. Leyden, of Berlin, in *Zeitschr. f. Klin. Med.* vii., s. 459-539. Such is the importance of the subject that we give the following abstract:

"The results of experimental occlusion of the coronary arteries have not been uniform; sometimes the slowing and weakening of the heart's contractions are gradual, blood pressure falls, *pari passu*, in the systematic arteries, and death occurs slowly; at other times, the cessation of the heart's action follows promptly, having been preceded by an exceedingly short interval of feeble, arrhythmic contractions. In man the effect on the heart varies, according to the degree of the sclerosis of the coronary arteries. Leyden therefore distinguishes four classes of the disease: 1. That in which, although the coronary arteries are sclerotic, their function is not essentially impaired, and the nutrition of the heart is not affected; 2. There is an acute thrombic softening, or hemorrhagic infarctus, of the heart-muscle, called by Ziegler "*myomalacia cordis*," and corresponding to *encephalo-myomalacia*; the affected portions break down or undergo fatty degeneration, and thus prepare the way for an ultimate *ruptura cordis*; 3. Here are found disseminated patches of fibrous induration (*myocarditis fibrosa*), which occur chiefly in the vicinity of the apex, and, by thinning the walls of the ventricle, may occasion *aneurisma cordis*; 4. Spots of fibrous induration exist in conjunction with circumscribed areas of softened tissue, as a result of thrombi. Here, evidently, the atheromatous change in the coronary arteries has not advanced steadily, but with periods of exacerbation and subsidence.

According to the clinical history, one may distinguish three classes of cases: 1st. The course of the disease is acute, and results in sudden death. After certain prodromata, such as vague anginous symptoms, dyspnoea, dizziness, etc., the patient faints, is seized with a sudden, intense angina pectoris, and presenting signs of cardiac failure, such as *oedema pulmonum*, expires. The autopsy reveals, aside from a possible rupture of the heart, areas of fibrous induration and recent hemorrhagic softening. 2d. The course of the disease in this class of cases is subacute, and is witnessed most often in men about sixty years of age. Symptoms of cardiac disturbance, which may have obtained, at length increase in severity; attacks of angina become more frequent and intense, cough and dropsy augment, and finally, after weeks or months of cardiac asthma and angina, which latter, if it remits at intervals, does so only to make way for a sensation of nameless anxiety, the sufferer succumbs. The dilated heart is found to be the seat of fibrous degeneration and thinning. 3d. The progress of the disease is chronic, and is associated with advanced age. This class of cases Leyden also divides into three groups: *A.* Characterized by sudden attacks of angina; *B.* the existence of a serious cardiac lesion is revealed by shortness of breath, feeble pulse, inability to exertion, etc., which may exist for five, ten, or fifteen years, but physical signs other than a weak, irregular action of the heart are wanting; the compensation is evidently good. *C.* The compensation has been destroyed; orthopnoea and oedema are developed, and the heart fails in an attack of more than usually acute angina, or death approaches slowly, ushered in by signs and symptoms of venous congestion. The post-mortem appearances are essentially the same as already described. Finally, Leyden is of the opinion that angina pectoris most frequently accompanies lesion of the heart-muscle, due to atheroma of the coronary arteries.

### THE TREATMENT OF PERICARDITIS.

By EDWARD T. BRUEN, M.D., Phys. to the Philadelphia Hospital.

From the *Medical Times*, Jan. 10, 1885.—The treatment of pericarditis depends altogether upon its cause. If, in a case of articular rheumatism, the symptoms of pericarditis make their appearance, you will simply continue the treatment of the rheumatism. If that is the alkaline treatment, you simply push the alkaline remedies. As you are aware, there are two plans of treating rheumatism,—the method with large doses of alkalies and the method with the salicylates of sodium or ammonium. I might expand this

idea of the treatment of rheumatic pericarditis so far as to say that the salicylates are useful in rheumatism to control two symptoms—the pain and high temperature. Often after the administration of this remedy the temperature rapidly falls and the pain disappears, and rapid convalescence may follow. At other times, although the pain and fever are lessened, the inflammation of the joints persists. This is because there still remains in the blood a certain amount of nitro-genous material, which is one of the causes of rheumatism, and which should be eliminated. As these products of retrograde tissue-waste are only eliminated in combination with alkalies, as urates of sodium and potassium, these alkalies should be administered. My own plan is to always use the alkalies in addition to the salicylate of sodium until the urine becomes alkaline. When this occurs I diminish the amount of alkali, but still continue it in sufficient quantity to keep the urine alkaline.

When pericarditis occurs in the course of Bright's disease, treatment will not be of much service, but the usual regimen for Bright's disease will be proper.

As I believe that this is merely a simple inflammation of the serous sac, I shall treat it as we ordinarily do inflammation of a serous membrane. I shall apply blisters, and use acetate and iodide of potassium internally. This is not the alkaline treatment, for I do not push these remedies in large doses. We now are administering ten grains of acetate of potassium with five grains of the iodide four times a day. Small blisters are applied over the præcordia. The action of the heart has been supported by small doses of digitalis. On admission, the pulse was dicrotic, and the action of the heart embarrassed and diminished by the exudation around the organ. The indication was therefore to support the action of the heart while trying to remove the inflammatory exudate. We have given ten drops of the tincture of digitalis three times a day, and for the first day or two alcoholic stimulus was also used, but this has been discontinued.

#### PRESYSTOLIC MURMUR HEARD DURING LIFE.

From the *Maryland Med. Jour.*, Jan. 24, 1885 —Dr. W. J. Jones read a paper and exhibited to the Clinical Society a heart in which a *presystolic* murmur was heard during life.

Dr. W. T. Councilman said that while there was some stenosis, the autopsy seemed to show that the orifice was large enough to allow the volume of blood to pass. No dilatation of the auricle nor evidence of the damming back of the blood upon the lungs could be found.

Dr. C. W. Mitchell said: The presystolic is the most variable of all cardiac murmurs, both as to its intensity and character. At times it is extremely loud and of a rough, grating nature; at others it may be so slight as to be entirely overlooked.

Hilton Fagge reports two cases occurring in his own hospital experience, in which mitral stenosis was found at the autopsy, and in none of which a presystolic murmur was heard during life. A very good method of increasing the intensity of the murmur is to have the patient walk hurriedly around the room two or three times; or if he is unable to do that, to have him sit up and lie down several times in quick succession. By these means the heart is made to act more vigorously, and the murmur is necessarily increased in intensity. These methods should be employed in every examination. If, however, no murmur can be heard, the diagnosis can frequently be made by the great hypertrophy of the right heart; the peculiar thrill felt at or near the apex, and the reduplication of the second sound at the base. I have seen cases in which the diagnosis was made on these signs alone, and fully substantiated by the post-mortem examination.

The remarkable features in the case related by Dr. Jones are the entire absence of hypertrophy, of the thrill and of the reduplication of the second sound. Mitral regurgitation is present in nearly every case of stenosis at this orifice, so that we have, as a rule, two murmurs. In recent cases, however, the regurgitant murmur may disappear owing to still further ste-

nosis of the orifice, so that the valves, though insufficient to close a normal orifice, become able to prevent regurgitation through a narrow one.

Dr. J. W. Chambers said a presystolic murmur had been denied by most authorities. A systolic murmur is caused by stenosis of the mitral orifice, but the auricle does not contract well and he hardly thought a loud sound could be produced by such a weak contraction. In the case related, he thought the chordæ tendinæ might have been slightly shortened and thus a murmur be produced. The only positive sign of the murmur is the double sound.

Dr. J. N. Mackenzie said one cause of the mitral murmur, not alluded to in text books, was the passive abnormal insertion of the tendinous chords.

## DISEASES OF THE ORGANS OF DIGESTION.

### GASTRITIS FAVOSA.

From an editorial in the *Louisville Medical News*, Dec. 27, 1884.—A pathological specimen of unique character was brought before the Vienna Imperial and Royal Society of Physicians on the 28th of November, by Professor Kundrat. It was a stomach taken from a patient who had suffered for some time with *favus universalis*. The disease had given rise to an abscess of the thigh, and the case had ended fatally in consequence of a severe gastro-intestinal disorder, marked by an uncontrollable diarrhea. The mucous membrane of the stomach showed numerous erosions mingled with diphtheritic swellings, while some foul putrescent masses and much mucous were found in the intestines.

The learned professor on seeing the specimen at once declared the lesion of the mucous membrane to be due to favus, and a microscopic examination confirmed the diagnosis by demonstrating the presence of the achorion Schönleini in the so called diphtheritic swellings. It is stated that the naked eye appearance of the gastric mucous membrane closely resembled the characteristic favus cups of the skin. But little of the fungus was found in the bowel, and it was the opinion of Professor Kaposi that the micro-organism had been destroyed by putrefaction in this situation.

This remarkable freak of the favus fungus, which has hitherto been looked upon as a cutaneous parasite only and incapable of extending its ravages to the mucus-lined cavities of the body, excited the wonder of the assembled savants, and gave rise to considerable discussion.

It would seem to be, clearly, the first recorded case of favus disease in the stomach and intestines, though doubtless it has often occurred unnoticed in patients suffering with this loathsome blight. The fact that such a serious extension of the disease is possible, gives to favus an importance of great moment, and suggests precautions in management and treatment never before thought necessary by the dermatologist.

Another point in the above case is worthy of careful investigation, though it is treated in the account with a passing remark. It is the occurrence of an abscess in the thigh in consequence of the parasitic disease. Was the abscess large or small; was it deep seated; did it contain the micro-organism of favus, and if so how did the latter find lodgment in the subcutaneous tissue? It is a well-known fact that achorion Schönleini is one of the most hardy, inveterate, and persistent of all parasites, that it will resist the action of most germicides, and that its spores will live for a very long time in almost any natural medium.

It is also well known that while the fungus is usually confined to a hair-follicle or the corneous scales of the epidermis, that the cups may crowd the papillæ and produce a cellular infiltration which presses upon the cutis, while the surrounding area becomes the seat of inflammation. Suppuration is therefore sometimes an accompaniment of the disease, the surrounding or subjacent tissue being the seat of ulceration or abscess. If this solution of

continuity should open a blood vessel or lymphatic, it is possible that the spores, which on an average are about half the diameter of a red-blood corpuscle, may be carried into the circulation, where they would live until lodged in some tissue favorable to their development. It is believed and taught by the authorities that the fungus can thrive only at the roots of the hair, or in epidermic scales; but if it be true, as the case above quoted seems to prove, that the epithelium of mucous membranes can serve as a nidus for the growth of the spores, it is not out of the range of possibility that in severe chronic cases attended by ulceration of structures surrounding or situated beneath the cups, that they may, through the medium of the blood, be transported to any mucus-lined viscus, and there produce the characteristic lesions of the disease.

Of course it is easy, and doubtless more rational, to account for the appearance of the fungus in the stomach of the patient above named upon the hypothesis that the spores passed by way of the mouth through the medium of the fingers directly, or in the food; but theories are cheap, and we throw this one in free of charge, with the hope that it may amuse the dermatologist, if it does not account for the transplantation of the fungus.

### STOMACH DYSPEPSIA.

By an OLD PRACTITIONER.

From the *Medical Age*.—Dyspepsia is one of the tributes which men pay to civilized and enlightened society. In probably the majority of cases the stomach suffers from no fault of its own, but is, rather, a poor starvling, robbed of its quota of nervous energy and struggling under a load which it might carry with ease were the guilty brain, which filches from it its vital stamina, to allow it its deserts. While over indulgence and insufficient mastication causes their hundreds of cases of dyspepsia, business and social cares and the worry, inseparable even in the most hardened, from misdeeds, cause their thousands.

Dyspepsia is not a disease, but the symptom of a disease, which may exist in any portion of the digestive tract. The term means difficult digestion and has no pathological significance. It is, therefore, apparent that it is very important in undertaking the treatment of a case of dyspepsia to prepare the way by a correct determination of the part in which the digestion is imperfect. I shall have reference, in what follows, to the stomach, and shall consider dyspepsia as it occurs there, purely as a functional disease, *i. e.*, in the ordinary acceptance of the term functional. Functional dyspepsia, then, presents no anatomical lesions.

Dyspepsia (stomach) is directly traceable to a variety of causes, among which may be enumerated the following: Deficiency of gastric juice, excess of gastric juice, perversion of the gastric juice, improper diet, psychical causes which deprive the stomach of nervous energy (as mental emotion, excessive brain-work, etc.) and mechanical constriction, as in tight lacing, or in occupations requiring a constrained position of the body, as, for instance, the trade of shoemaking, etc.

While deficiency of gastric juice may result from a variety of affections of the stomach, particularly of an inflammatory nature, it may also occur without appreciable lesion. In addition to emotional causes, the physical causes found in bodily exhaustion, from disease or fatigue, and privation of water may prevent a sufficient secretion of the gastric juice for the purpose of digestion.

An excess of gastric juice is most commonly of nervous origin, although the exact *modus operandi* of the cause is not yet clear. The secretion may be either of acid or of alkaline reaction. When alkaline, we have the pyrosis or water-brash, the popular name of which, "heart-burn," is taken from the sensation which it causes at the cardia. This excessive amount of fluid in the stomach is not always alkaline in its reaction, and in such cases it is either the product of excessive secretion of the gastric juice, or it acquires its acidity from acetous (butyric) fermentation of food which has failed to digest through a deficiency of gastric juice. We thus have the apparently anomalous

condition of acidity, due to either a deficiency or an excess of normal acid secretion by the stomach.

Perversion of the gastric secretion is never primary in its origin, being always associated with other constitutional affections.

But the normal quality of the gastric secretion may not be impaired, and yet the patient may suffer from distressing dyspepsia. In such cases the difficulty lies in impaired capacity of the stomach. This impairment may be due to exhaustion of the stomach from the excessive demands on it from over-feeding, or to a depression of its vitality in common with that of the system at large from general disease, or from the effects of age. The exhaustion may, moreover, be due to diversion of nervous energy to other parts of the body. It is safe to assume, for practical purposes at least, that there is in the system a definite quantity of nervous energy, and that nature has distributed this to various organs, in such quantity to each, as is necessary to the proper discharge of their several functions. When, therefore, one organ consumes more than its share of this energy, it must be at the expense of the other organs. Herein we have a hint at the underlying cause of a vast deal of the dyspepsia which afflicts the modern man. The cares of business in our unnatural modern life divert from the stomach to the brain and nervous centres the energy necessary to the discharge of its functions.

In deficiency of gastric secretion, the object of treatment is to improve the tonicity of the gastric glands, and while endeavouring to effect this, to supply from our armamentarium such agents as will cause the digestion in which nature fails. These ends are best attained by means of the simple bitter tonics and nitro-muriatic acid. But much depends on the time at which these are given. To give the acid before meals and the bitter tonic after meals would be but to aggravate the original trouble. Without being drawn into a committal to the doctrine of *similia similibus curantur* (although I, by no means, holds this doctrine to be absolutely absurd) I would declare my faith in the dictum that acids check acid and stimulate alkaline secretions, and alkalies check alkaline and stimulate acid secretions. To give an acid before meals, therefore, would be to diminish the excitability of the gastric glands (whose secretion is acid), and thus render them unsusceptible to the stimulation of the food which is ingested. Give it an hour after a meal and you superadd its digestive action to the action of the juice which the food has stimulated the glands of the stomach to secrete. Give the simple bitter tonics before meals and you give tonicity to the stomach, and thus prepare it to secrete its own acid and pepsine in sufficient quantity for the purposes of digestion. When fermentation ensues, owing to deficiency of digestive acid, the process may be delayed by the administration of glycerine after each meal. I have seen cases in which the exhibition of a teaspoonful of glycerine after a meal has prevented this fermentation with its distressing subjective symptoms, by keeping it off sufficiently long to permit of the action on the food of the slowly secreted stomach secretion. In excess of acid secretion, we find in the physiological law which I have quoted a guide to the suppression of this excess. Give the acid an hour before meals in such cases, and in combination with bitter tonics.

When dyspepsia is due to the robbing of the stomach of its quota of nervous energy, the remedy suggests itself. If the victim will not abate the eagerness of his pursuit after wealth, he must continue to pay the penalty, for nerve tonics are at best poor apologies for treatment under the circumstance.

#### CANCER OF THE STOMACH.

By JAMES T. WHITTAKER, M.D., Prof. of Theory and Practice of Med., Med. Coll. of Ohio, Cincinnati.

From the *Cincinnati Lancet and Clinic*:—After giving the clinical history of a case the speaker says:—The arguments in favor of the correctness of the diagnosis were the occlusion of the pylorus, the pain, more or less severe according to the diet, the dilatation of the stomach, with distinct sense of fluctuation afforded by its fluid contents, and finally, the walnut sized tumor, detected by placing the patient in the sitting position with his knees drawn

up. The arguments to disprove the diagnosis, were the absence of blood-vomiting, and the age of the patient, male (33); neither of supreme importance in the exclusion of cancer.

Cancer occurs most frequently between the ages of forty and seventy; but also, exceptionally, at every age. Congenital cases have been observed. Wilkinson, Cullingham, and Wiedenhofer have observed it in young children, with at times general implication of other organs.

The point of greatest interest is the etiology of the disease. We are thoroughly familiar with the fact that carcinoma begins in the epithelial structures. The question now agitated is, may it not result from simple gastric catarrh? Virchow maintains that he has seen every phase of a transition stage between catarrh and cancer, and modern pathologists are more and more inclined to adopt the local origin of cancer.

That cancer often develops about the cicatrix of a gastric ulcer has long been known, but it is far more important for us to know that catarrh may be its cause, because catarrh is, strictly speaking, amenable to cure. Such a view of the genesis of cancer would give us over it at least preventative control.

In illustration of the difficulty in making a differential diagnosis, the speaker referred to the case of a young man, aged 28, who showed unmistakable occlusion of the pylorus with persistent vomiting, and progressive emaciation; where no tumor could be felt even in the knee elbow position. He felt compelled to look upon the occlusion as the result of cicatrization after a gastric ulcer. The patient, almost in *extremis*, was operated upon by his colleague Dr. Ransohoff, as a concession to his plea for a chance of life. He died upon the table, where it was seen that the pylorus was occluded by a scirrhous that had developed chiefly internally and had fastened the whole pylorus inaccessibly high up under the liver and ribs.

In palpating the tumor we must often be content with a sense of resistance, whereby we are often mistaken by feeling the contracted rectus abdominis.

Where the cancer is diffuse along the anterior wall and there is no, or but little, pyloric occlusion, the diagnosis is of course still more difficult, as emaciation in these cases is slow in setting in, and perhaps does not develop at all. He has seen individuals of obesity maintain their adipose tissue pretty much throughout the disease. The speaker closed his report by dwelling upon the value of placing the patient in different positions in bed and out of it, in the effort to discover the tumor, and by emphasizing the value of the view that cancer of the stomach may develop from a long continued, neglected, or continually aggravated gastric catarrh.

### GASTRIC THERAPEUTICS.

By C. C. P. SILVA, M.D., Chicago, Ill.

From the *Western Med. Reporter*, Jan., 1885.—Among the agents which act differently on an empty or a full stomach, we have the *acids* and the *alkalies*. Acids, chiefly hydrochloric and phosphoric, when taken fasting, check the formation of acids in the stomach, due either to the action of the gastric glands or to abnormal fermentation of the starchy, saccharine and fatty elements of food. When administered during the process of digestion they increase the acids of the stomach. Alkalies, principally the alkaline carbonates, given in small doses (10–15 grs.), on empty stomach, promote the flow of the *acid gastric juices*; on full stomach, in larger doses (3 ii–3 i), they neutralize them, though not in a permanent manner. It follows then, that the *mineral acids*, chiefly *hydrochloric* and *phosphoric*, are indicated whenever there is an excess of acid formation in the stomach, administered before meals, and the *alkaline carbonates*, in small doses, fasting, when there is deficiency in the amount of those acids. The *alkalinization* of the *gastric acids* by a large dose of an *alkaline carbonate*, being but a temporary action, is better accomplished by the acids on empty stomach.

*Beef Tea—What is It?*—Beef tea is an aqueous solution, by ebullition, of a certain portion of organic matter and some soluble and insoluble salts. Chevreul, in his analysis, gives, for a thousand parts of beef tea, 15 parts of

soluble organic matter and from 15 to 20 parts of soluble and insoluble salts. The former represents the *osmome*, or the extractive matter of beef, as it was formerly called. This extract contains some assimilable principles, as *fat*, *inosites*, *inosic acid*, and *sarcolactic acid*, but also abounds in non-assimilable principles, and consequently useless, as *gelatine*, *creatine*, and *creatinine*. Among the soluble salts in beef tea, we find *chloride of sodium*, *alkaline phosphates* and a small quantity of *chloride of potassium*; the insoluble salt is represented by the *phosphate of calcium*, which, by the aid of the *sarcolactic acid*, is kept in solution.

It follows from this analysis, that beef tea, which is deemed so useful to the feeble and convalescent, can furnish but little material to the organism, unless it should be absorbed in large quantities. In this manner it acts not only as an analeptic and restorative, but also as an aperient and stomachic.

Good beef tea should be acid, and it is owing to the acidity that it acts as a stomachic. A very useful addition to beef tea, is from four to five drops of hydrochloric acid to the quart. The role of this acid is simple:—1st. It favors the solution of a certain quantity of albuminoids that would have been coagulated by the heat. 2nd. It dissolves the phosphate of calcium of the bones and thus furnishes a restorative to the system. 3rd. It adds its acidity to that of the gastric juice. Besides, beef tea is one of the preparations by means of which we introduce into the organism a great quantity of chloride of sodium; that is a very indispensable mineral principle. It is evident that beef tea is rather a stomachic than a nutritive agent. In view of the above, we comprehend that extract of beef, which cannot be compared with beef tea, is a useless preparation, if not altogether dangerous. Dogs fed exclusively with it, died either from inanition or because they had assimilated creatine or creatinine, which are but waste matter that the organism should eliminate, as urea, uric acid, etc.

### CHRONIC INTESTINAL CATARRH.

By WM. PEPPER, M.D., LL.D., Prof. of Clin. Med. in the Univ. of Penn.

From the *Medical Times*, Jan., 10, 1885.—The location of the pain, the considerable amount of mucus in the stools, the fact that gastric digestion was not much affected, and that there was not nearly as much prostration of the general health as we should have expected had the disease involved the higher portion of the alimentary canal,—all indicated that the disease was chiefly in the larger bowel.

In considering this case, I pointed out to you the great importance of rectal medication, and that in many instances the use of suppositories or enemata was the only way in which the disease could be cured; and that, under this plan of treatment, the recoveries were often remarkable, while the continued use of medicines by the mouth might prove ineffectual. By this plan the stomach can be reserved for the administration of tonic remedies.

In this case I ordered an injection of four ounces of water containing one grain of nitrate of silver and fifteen drops of deodorized laudanum to be thrown into the bowel, and the following to be administered by the mouth:

R. Strychninæ sulph., gr.  $\frac{1}{4}$ ; acidi hydrochloric. dil., 3ij; tinct. gent. comp., q. s. ut ft.,  $\frac{3}{4}$  iv. M. Sig.—A teaspoonful before meals.

Under this treatment, decided improvement has taken place. The tongue looks better, and the diarrhœa is not so marked. The treatment will be continued. The restricted diet will still be insisted on, and the patient kept in bed most of the day, being allowed to be up a short time to take moderate exercise.

I have seen a number of remarkable results from even such simple injections as the one used in this case. A chronic dysentery is sometimes kept up by a trifling patch of inflammation in the rectum or sigmoid flexure. I have had a number of patients come to me who had been under treatment for years. They would have two or three loose stools in the morning, and then be comparatively comfortable all through the day. Change of diet would have but little effect. There would be some colicky pain across the

lower part of the abdomen and in the line of the large intestine, and not much about the umbilicus; the appetite pretty good, and the tongue clean, although rather pale. I have seen such cases which had existed many years, and in one of them the disease had lasted fifteen years, and had resisted all kinds of remedies. There are many cases of chronic diarrhoea which are beyond the influence of remedies administered by the mouth; and it is not until, by the use of medication addressed to the rectum, we have relieved some local catarrhal irritation, that we are able to effect a permanent cure.

Where the rectum is very irritable, and particularly where there are associated with it internal hemorrhoids, and possibly a disposition to looseness or diarrhoea, I wish to refer to the value of hot injections into the rectum, and especially such injections with the addition of some astringent. I know of no substance which is more agreeable as an enema than coffee. From half a pint to a quart of strong black coffee may be used, as hot as will be tolerated by the rectum. You have seen the beneficial effects of hot water in external inflammations in the form of hot-water dressings, in catarrh of the stomach in the form of hot drinks, and in uterine inflammation in the form of hot-water injections. In these cases of congestion and catarrh of the lower bowel, a good plan is to give in the morning an injection of hot water, and then at another period of the day, as at night, a second small medicated injection, and have the patient go to sleep and retain it.

On the other hand, I also want to call attention to the value of very small cold injections into the rectum in cases of irritable rectum. An injection of two ounces of water, as cold as the patient can bear without giving him a chill, retained all night, will sometimes act magically in relieving the irritation disposing to frequent discharges.

All of this simply goes to show the value of enemas adapted by your judgment to the different conditions of the systems, and particularly the different local conditions: these constitute a valuable measure of controlling many conditions which too often are treated with medicines given only by the mouth, which never reach the spot.

### ABSCESS OF THE LIVER.

By E. G. JANEWAY, M.D., Prof. Path. and Clin. Med., etc., Bell. Hosp. Med. Coll., N. Y.

From the *N. Y. Med. Jour.*, Feb. 7, 1885.—1. Abscesses of the liver can practically be divided into those affecting the left lobe, or the lower part of the right lobe, so that the abscess when formed produces an elastic or fluctuating tumor below the free borders of the ribs; and of those situated in the upper or posterior portion of the right lobe. The reason for this division is that abscesses in the two former situations are easy of access, of diagnosis, and of operative interference. The abscess in the last-mentioned situation is the one which more often gives rise to difficulty in diagnosis, or, if diagnosed, to doubt as to the best and safest methods of interference.

2. There are several methods by which the existence or non-existence of adhesions between the liver and abdominal wall can be made out. The presence of hepatic friction, audible or tactile, shows the absence of adhesions, but the probability that they will soon be formed. If, on palpation, the edge of the liver remains fixed, and does not descend with respiration, adhesions have in all probability taken place. Again, a long needle—that of a hypodermic syringe or aspirator—introduced into the liver, will, if the outer end is left projecting some distance, move upward as the liver descends, and downward as the liver ascends, if no adhesions exist. But, if these have formed, then the needle does not move.

3. The difficulties which arise in the diagnosis of liver abscess may in many cases be surmounted by a careful survey of the history, of the condition of the liver, and by exclusion of the existence of sufficient disease in other organs to account for the symptoms.

The mistakes which I have seen made have been:

a. To considered a liver abscess some other disease, as malarial fever (remittent and intermittent), typhoid fever, or tuberculosis.



b. To consider an abscess of the liver some other disease of the liver, as hydatida, cancer, congestion, fatty liver, hyperplasia.

c. To consider the swollen liver an aneurysm of the aorta, especially in case of abscess of the left lobe of the liver, where pulsation was communicated to it by the aorta.

d. To consider an abscess of the gall-bladder an abscess of the liver, and *vice versa*.

e. To consider a supra-hepatic abscess an abscess of the liver.

f. To consider an abscess of the liver one of the abdominal wall, and *vice versa*.

4. As regards the etiology of liver abscess, I believe that many of the apparently idiopathic are of traumatic origin. I have in several instances ascertained its occurrence in persons who were in the habit lifting heavy weights, particularly those who did so in hot places, as firemen, those unloading vessels, etc., by placing the right elbow firmly against the side, and then having the weight raised in this way. By this statement I do not mean to deny the probable influence of bacteria in the origination of abscesses, but to attribute to traumatism the establishment of that favorable condition which will allow of abscess formation.

I believe that all accessible abscesses associated with an adherent liver are best dealt with by free incision, washing out with an antiseptic fluid, the introduction of a drainage-tube, and by antiseptic dressing.

The writer had occasion, in one case of non-adherent liver with abscess, to employ the following means of promoting adhesions: The abscess was situated in the lower portion of the right lobe, so as to be reached below the free border of the ribs. An abdominal bandage was wound moderately tight around the body, and then the abscess was emptied by aspiration through a cannula, a trocar being used instead of the needle. After emptying the abscess, the cannula was allowed to remain, care being taken to prevent access of air by a valve of adhesive plaster. In a few days the cannula was removed and reintroduced an inch and a half from the point of previous puncture, and again, as before, allowed to remain. After this, hepatic friction, which had previously been audible, disappeared, and the motion of the liver with respiration ceased, proving adhesion. Then a free incision was made between the two places through which the trocar had been introduced.

The use of the abdominal bandage is sufficiently manifest as a means of preventing motion of the liver, and of holding it fixed, and needs no special comment. Under such treatment a patient should be kept absolutely quiet in bed. The proper treatment of the large abscess in the posterior part of the right lobe is a matter of considerable doubt. In many cases aspiration is the only resource. Should the abscess, however, be near the surface, and this can be ascertained by the depth to which the needle attached to an aspirator has to be introduced before pus is reached, the writer believes that, if the abscess had been aspirated and the sac refilled, then it would be wiser to make a free incision, even should it be necessary to excise a portion of a rib in order to accomplish the drainage of the sac. A careful consideration of each case would be necessary, as without proper precautions the pleural sac would be opened.

The medical treatment must be symptomatic.

#### CHRONIC DYSENTERY TREATED BY VOLUMINOUS ENEMATA OF NITRATE OF SILVER.

Dr. Stephen Mackenzie says the mode of procedure he adopted was as follows: The quantity of nitrate of silver to be used was dissolved in three pints of tepid water in a Leiter's irrigating funnel, which was connected by india-rubber tubing with an esophageal tube with lateral openings. The patient was brought to the edge of the bed and made to lie on his left side, with his hips well raised by a hard pillow. The terminal tube, well oiled, was passed about eight or ten inches into the rectum, and the fluid allowed to force its way into the bowel by gravitation. The injection rarely caused much pain, and often none. It usually promptly returned; but, when long

retained, it was advisable to inject chloride of sodium to prevent absorption of the silver-salt. Various strengths had been used, from thirty to ninety grains in three pints of water, but usually one dram of nitrate of silver was employed. Sometimes one, sometimes two injections were required, and in some cases numerous injections were necessary; but in all the cases thus treated, many of which had been unsuccessfully treated in other ways previously, the disease had been cured. In most cases other treatment was suspended, but in some Dover's powder or perchloride of iron, which had been previously administered, was continued or subsequently prescribed. The cases narrated were these: (1) One in which the disease had lasted several years, on and off; two injections were used, and the case was cured in six weeks. (2) Second attack, duration uncertain; four injections used; cured in five weeks. (3) Duration two months; two injections used; cured in three weeks and a half. (4) Duration five years; one injection used; cured in three weeks. (5) Duration eighteen months; two injections used; cured of dysenteric symptoms, but remaining under treatment for diabetes. (6) Duration fourteen months; one injection used; cured in seven weeks. The treatment laid no claim to novelty.—*American Practitioner*, Jan., 1885.

#### DRY FOOD IN THE TREATMENT OF GASTRIC DISORDERS.

From the *Therapeutic Gazette*, Jan. 15, 1885.—Gubler pointed out that milk diet is only productive of harm in cases of torpid dyspepsia, or in those in which there is a disposition to diarrhoea. Debove has shown that the injection of milk may lead to dilatation of the stomach, or will certainly aggravate that condition if already present.

Dr. H. Huchard has had cases of the most diverse type of gastric disorders which obstinately resisted various plans of treatment, and in whom the injection of fluid, of no matter what character, always produced an aggravation of the symptoms; in these cases mere restriction in the amount of fluid taken was the sole means which produced any improvement. Such a plan of treatment (restriction to a dry diet) is especially valuable in cases of certain forms of dilatation of the stomach and atonic dyspepsia. This method, which was first introduced by Chomel, consists only in the forbidding, to as great an extent as possible, of all forms of drinks, fluid foods and medicines. Lukewarm baths and frequent sponging of the body will serve somewhat to replace the lack of fluid in the diet, and never more than one glass of the patient's ordinary beverage should be taken during meals. The interval between the morning and evening meal should not be less than eight hours. The diet recommended permits the use of various soups and broths, but they should be as concentrated as possible. Different kinds of meat are not objectionable, but they should be eaten without gravies or sauces. Fruit is allowable, with the exception of the more watery varieties, such as grapes, plums and melons. Of drugs, only those should be given which are suited for administration in the dry form.

#### THE TREATMENT OF CORPULENCE ON PHYSIOLOGICAL PRINCIPLES.

From the *Therapeutic Gazette*, Jan. 15, 1885.—Ebstein, in his work on corpulence, gives some valuable practical points for the reduction of obesity. According to him, fattening is strictly analogous to the fattening of cattle, and depends on overfeeding. He, however, disputes the current view that fat makes fat; on the contrary, he thinks fatty food protects the albumin and prevents its forming fat. His plan of treatment, therefore, consists in moderating the quantity of food, and while cutting off all vegetable carbohydrates, sugar, starch, etc., allowing a moderate quantity of fat, two or three ounces daily, to be taken. He also suggests that the diet should be monotonous, greasy and succulent, so as to cause satiety rapidly. He disallows beer, but permits light wines.

The plan advocated appears rational, and is free from the objection to Banting's method, which is too much like starvation. The following is the diet used successfully by Ebstein in one of his cases:

**Breakfast.**—One large cup of black tea—about half a pint—without sugar; two ounces of white bread or brown bread, toasted, with plenty of butter.

**Dinner.**—Soup, often with marrow; from four to six and one-half ounces of roast or boiled meat, vegetables in moderation, leguminous preferably, and cabbages. Turnips were almost, and potatoes altogether excluded. After dinner, a little fresh fruit. For second course, a salad or stewed fruit without sugar. Two or three glasses of light wine, and immediately after dinner a large cup of black tea, without milk or sugar.

**Supper.**—A large cup of black tea, as before. An egg, a little fat roast meat, or both, or some ham with its fat, bologna sausage, smoked or fried fish, about one ounce of white bread, well buttered, occasionally a small quantity of cheese, and some fresh fruit.

On this diet the patient lost 20 pounds in six months. Ebstein insists on the necessity of always keeping to the restricted diet if the tendency to corpulence is to be successfully combated.

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## DISEASES OF THE URINARY ORGANS.

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### REMARKS UPON CHRONIC CONTRACTED KIDNEY WITH NORMAL URINE.

By H. C. Wood, M.D., Clin. Prof. of Nervous Diseases in the Univ. of Penn., and Neurologist to the Philadelphia Hospital.

From a paper read before the *Coll. Phys., Phil., Pa.*—The writer gives the clinical history of a case in detail, and also the results of the autopsy, and then says:—The point to which I want to direct especial attention, however, is that the urine was examined various times by Dr. Tomlinson without his finding any evidence of contracted kidney, although such lesion existed. My first glance at the patient made me think that she had chronic Bright's disease, but a very careful examination of the chemical reactions; the specific gravity, and the microscopic deposits of the urine so entirely failed to justify any suspicion that I was entirely misled in this feature of the case. I should here state that my own examinations of the renal secretion were so entirely in accord with the statement of Dr. Tomlinson, that they were not, as they ought to have been, repeated upon various specimens of urine. As already stated, the aspect of Mrs. L. suggested the existence of chronically contracted kidney, but there was no increased arterial tension, the heart's action whilst she was under my care being uniformly feeble. It is many years since I ceased putting confidence in the absence of albumin as being of much value in disproving the existence of contracted kidney, but I have hitherto believed that reliance could be placed upon the specific gravity of the urine. The importance of examining the specific gravity of the urine cannot be over-estimated; and the import of a persistent specific gravity of 1010 or under can scarcely be mistaken; but in addition to the case just detailed the following is of great interest as indicating that normal urine may accompany a fatally diseased kidney.

Mrs. —, aged 58, the mother of two healthy children, consulted me in the month of April, 1883, on account of certain spells which afflicted her. A careful examination of Mrs. — resulted in complete negations so far as organic disease was concerned. The urine was normal; there was no failure of mental power, choked disk, palsy, headache, or other local symptom discoverable, and I finally settled down to the diagnosis of gastric vertigo. Under appropriate treatment the patient improved, and I saw her at my office for the last time June 4, 1883.

In April, 1884, I was hastily summoned to her bedside, and found her comatose, with a history of distinct convulsions, which were said to have been diagnosed as hysterical by a neighboring practitioner, who, I was also told, after examination of the urine had stated positively there was no disease of the kidneys. On post-mortem examination the brain was found

normal, but the kidneys presented the gross appearances of advanced contracted kidney; and careful microscopical examination by Dr. G. A. Piersoll proved that the condition of the organ was as it appeared. Dr. Wood also gives another case bearing on this point.

The symptom of increased arterial pressure and cardiac hypertrophy, upon the diagnostic value of which stress has been laid, afforded no aid in the group of cases here narrated. The patients were all large, stout, middle-aged, married women, with full busts, making the recognition of a slight degree of hypertrophy exceedingly difficult, and the circulation in the two more serious cases was certainly enfeebled.

The practical conclusion to be drawn from these cases is that reliance cannot be placed upon a single examination of the urine, but that in any doubtful case of chronic disease it is our duty to examine the renal secretion repeatedly, noting whether albumin appears after a heavy meal of flesh, and whether the urine of abstinence is of abnormally low specific gravity. I have seen patients who certainly did not have Bright's disease, but in whom an irritant drug or an alcoholic excess would produce albuminuria. It is to my mind very probable that such people will eventually develop renal disease. At any rate these cases have suggested to me that possibly as we employ purgatives to make a so-called therapeutic test in a case of suspected typhoid fever so we might use cantharides, turpentine, or other irritant drug in a case of suspected Bright's disease. If on trial it should be found that a slight irritation would seriously affect the urine, the case should be looked upon with the greatest suspicion.

### OXALURIA.

By CHARLES N. DURSLEN, M.D., of Chicago, Ill.

From the *Cincinnati Lancet and Clinic*, Dec. 13, 1884.—As to the comparative and respective merits of the nitromuriatic acid and biphosphate of sodium in oxaluria, the nitromuriatic acid is pre-eminently useful and especially adapted to cases connected with dyspepsia or a disordered state of the liver, also to hypochondriac cases by its resembling the acid of the gastric use, and being at all events an excellent digestive tonic and hepatic alterative.

Dr. H. C. Wood says in *Pereira's Med. and Therap.*, p. 85: "Nitromuriatic acid is often very useful in cases of indigestion, dependent upon a want of tone of the mucous membrane of the alimentary canal. There is a peculiar condition of the system, characterized by debility, lassitude, weakness in the lower limbs, low spirits, dyspeptic symptoms, together with the presence of crystals of oxalate of lime, either octohedral or dumb-bell, in the urine, in which nitromuriatic acid is almost a specific, especially when combined with proper hygienic measures."

In simple, uncomplicated cases of oxaluria, however, or in those accompanied by anæmia, and especially with costiveness after improvement of the general state by hæmaturics and other tonics, I deem, generally speaking, the biphosphate of sodium preferable. If it should prove to have similar chologogue properties as the common (tribasic) phosphate of sodium, it may even be applicable in cases of torpor of the liver.

As to the chologogue properties of the common phosphate there can be no doubt, I having used it often in infantile cases, especially in cholera infantum here, with great success.

Without even crediting such an eminent authority as Pereira, who deems the mineral acids in general spanæmic, though less decidedly than the vegetable, or the alkalines, I do believe that their tonic power is confined to their acting on the stomach in dyspeptic cases much more than on the blood, and on the other side I do not consider the tonic element, as regards the biphosphate of sodium, as very important. It is doubtful anyway if the phosphates produce the same hæmatinic effect as pure phosphorus or its binary compounds, especially its best medicinal form, the phosphate of zinc, and in oxaluria their efficiency is certainly due partly to their special and alterative properties and partly to their laxative power.

**NITRIC ACID A PROBABLE MEANS OF DIFFERENTIATING  
BRIGHT'S DISEASE OF THE KIDNEY FROM THAT IN  
WHICH THE ALBUMINURIA IS CAUSED BY FUNC-  
TIONAL DISTURBANCES AND MAY BE  
TERMED "LATENT ALBUMINURIA."**

By ALLARD MEMMINGER, M.D., Charleston, Prof. of Chemistry in the Med. Coll. of South Carolina.

From the *N. Y. Med. Jour.*, Feb. 7, 1885.—Whatever view we take as to the cause of albumin in the urine, I think we can safely say the combination of albumin with the urine is an evidence of some pathological condition, be it of the blood or else of the structure of the urine-secreting apparatus. Whether, then, we consider the albumin of serum like unto or different from the albumin in urine, or whether white-of-egg albumin taken into the stomach will appear in the urine, we still must consider, with the great Berzelius, that white-of-egg albumin and serum albumin behave very differently with nitric acid, both being precipitated by this reagent, the latter being dissolved by an excess of the same, whereas the former is only moderately soluble.

It was from this standpoint, coupled with the fact that other albuminous principles (namely, globulin, peptones, etc.) sometimes appeared in the urine, that I instituted an examination into the use and application of nitric acid as a means for testing the presence of various modifications of albumin, as well as observing its effects on different urines taken from patients not supposed to be subjects of any serious organic affection of the kidney. On my first investigation I was struck with this fact, and, indeed, convinced of the correctness of the observations of others, that nitric acid and heat failed at times to demonstrate the presence of albumin, the same being found to be present by both picric acid and sodium tungstate.

This occurred so often that I was forced to discard nitric acid, and use in its place the other more sensitive reagents.

On reviewing the matter, and remembering Gerhardt's views of latent albuminuria, I conceived the idea that possibly this failure of nitric acid was only in the latent form of the disease, and that, if I could so modify its action, or rather the action it produced on the albumin of the urine, I might possibly arrive at a way of diagnosing these conditions. After many trials and as many failures, I at last found that if, after heating (boiling) the urine and nitric acid together, I plunged the test-tube into very cold water, for the first time albumin appeared, which, on comparison with the same amount of urine treated with picric acid, showed a like amount of an albuminous principle. This discovery being made, I collected several specimens, and arrived always at the same result. I have since endeavored to explain this difference of behavior in the albumin; but have as yet not succeeded. It has appeared to me from my investigations that when nitric acid and heat failed, being used in the ordinary way, it was a sign that the disease (or, I should rather say, the cause of the albumin) was due to functional disturbances and not to any serious disorganization in the kidney-secreting cells. I have as yet not had the opportunity of making a post-mortem examination of one who has suffered from what I may term functional albuminuria, but, from the readiness with which it gives way to treatment, I am compelled to regard it as not belonging to that class of cases known as Bright's disease.

CASE I.—A male patient, about sixty years of age, born of healthy parents, was well up to a year ago, at which time the disease from which he is now suffering first made its appearance. When called in, I found this gentleman suffering from shortness of breath, aggravated at times by what I termed in his case nervous asthma. He also had an extremely irritating and violent cough. An examination of his lungs, however, proved the absence of any decided pulmonary trouble. Besides a little dullness, all I could detect was a slight emphysematous condition, no doubt brought on by the violent fits of coughing. Being at a loss to discover the cause of this chronic bronchitis and nervous asthma, I instituted an examination of his urine. I was struck with its decided acidity, and found, on further examination, a large excess of uric acid. Nitric acid was now used in the ordinary way, but gave nega-

tive results as regards albumin. Not satisfied with this, I applied my modification of the nitric-acid test, and found quite an appreciable amount. On a review of the case, I came to the conclusion that the bronchitis was due to the abnormal amount of uric acid in the system, which, by its toxic influence, not only induced this, but also the appearance of albumin, possibly aggravating the same by an irritating action on the structure of the kidney. With this view, I placed my patient on the use of the following:  $\mathcal{R}$  Lithii benzoat., 3 j; lithii carbonat., 3 ij; potassii bicarbonat., 3 ij; chloroformi, f 3 j; aquam destillatam, ad f ʒiv. M., ft. mist. Sig. A teaspoonful three times a day in a tumblerful of Buffalo Lithia Water, Spring No. 2.

The effect of this treatment was very decided, for not only did the cough cease, but the labored respiration, nervous asthma, and albuminuria disappeared in the space of about ten days.

My plan of using nitric acid is as follows: About 5 c.c. of the filtered urine are put into a test-tube and heated to about 180° F., at which temperature the alkaline phosphates will, of course, precipitate out if the urine is either alkaline or neutral. To the fluid then are added 4 to 5 drops of strong nitric acid, and the contents, if now distinctly acid, are brought to the boiling point and there kept for a few seconds; the test-tube is now plunged into very cold water, and there kept until it has cooled. If only traces of albumin are present, fine filaments are seen floating in the urine, resembling much the appearance of mucin; if, however, larger amounts are present, the urine appears cloudy, and, on standing, deposits a precipitate of albumin. This albumin is no longer soluble in nitric acid, and, if again boiled, instead of clearing up, remains undissolved.

### FALSE ALBUMINURIA.

By GASPAR GRISWOLD, M.D., M.R.C.S., of New York.

From *N. Y. Med. Jour.*, Jan. 17, 1885:—Dr. Griswold said false albuminuria included two distinct classes of cases: (1) Those in which the urine does not contain albumin, but a precipitate resembling albumin is noticed under ordinary tests, and (2) those in which albumin is present in the urine, but does not come from the kidney. A small quantity of albumin in the urine was often of greater importance than a large amount, since there was no difficulty in those cases of Bright's disease in which there was marked albuminuria, which was usually accompanied with extensive dropsical effusion. It was of great moment, therefore, to decide whether a slight cloud discovered under careful testing was really albumen or not.

In this paper Dr. Griswold said he would confine himself to the ordinary tests of heat and nitric acid; but it must be understood that the test-tubes employed should be absolutely clean, that the urine should be carefully filtered, and that the testing should be made in a suitable light, with the tube held against a black background. He then proceeded to speak of the substances in the urine which were likely to give precipitates resembling albumin, and the mode of detecting them.

(1) *Phosphates*. Here the heat-test and cold nitric acid test would answer. (2) *Mucus*. This did not usually interfere with the examination for albumin; but there are two exceptions: (a) when the mucus was alkaline, and (b) when it was in such excess that a slight cloud of albumin could not be observed. In the first condition the cold nitric acid test would answer, and in the second the mucus could be removed by adding liquor potassæ and filtering; when the cold nitric acid test could be employed as before. (3) *Uric acid*. In this case the urine was to be diluted. (4) *Peptones*. True peptones were not precipitated, but hemipeptones were precipitated by cold nitric acid. (5) *Resinous drugs, like copaiba*. Here alcohol could be used to dissolve the resinous precipitate.

When albumen was present in the urine, but did not come from the kidney, it was due to one of the following substances: (1) *Blood*. To be detected by the microscope. In some instances only albumen and coloring matter remained; the corpuscles no longer existing. Here the test for hæmoglobin was to be applied. (2) *Pus*. (3) *Prostatic or spermatic fluid*.

# SURGERY.

## OPERATIONS, APPLIANCES, DRESSINGS, ETC.

### THE GREAT ADVANCES IN SURGERY, AND HOW THEY HAVE BEEN MADE.

By JOHN H. PACKARD, M.D.

In the Annual Address before the Academy of Surgery of Philadelphia, and published in the *Medical Times*, Jan. 24, 1885, Dr. Packard says:—The science and art of surgery have been built up, as we now have them, by observation and invention. Yet this expression is hardly correct. In the construction of a building the workmen are guided by a plan. The architect has a definite idea in his mind of what the result is to be, and to the carrying out of this every man's task is subordinated. No such plan can exist in a science which has to deal with constantly varying conditions, with an incalculable number of combinations; or in the art associated with that science.

We have, however, a vast mass of experience, accumulated and recorded by hosts of workers, past and present, and marshalled into a sort of order by those whose abilities and position have qualified them for the task. Certain general principles have thus been evolved, which constitute the body of surgical science. Yet if one were to undertake to set down absolutely unquestionable doctrines or principles only,—fixed facts, which it is certain cannot by any further degree of research be changed or set aside—he would find that the resulting material would be of very small bulk indeed. What had seemed to be a stately building would turn out to consist of a very few stones, with shapeless and irregular, because temporary and mutable, scaffolding over them.

This statement may appear to be very disparaging to the immense amount of surgical literature; but in fact this is made up largely of history, and of quotation of the recorded experiences and opinions of others. Especially is such the case in this age of bookmaking; and the difficulty is not that there is so much that is new to be read, as that it can scarcely be separated from the old with which it is mixed. The books which have really been great additions to the world's stock of knowledge have been but few, almost as few as the great advances in surgery, which we are now engaged in considering.

A great step in surgery is taken when a new procedure, adapted to various morbid conditions, is devised, or when a procedure already known is extended in its application to one or more classes of cases which are of frequent occurrence, and which have previously been looked upon as intractable.

Such a step was taken by the surgeon, whoever he may have been, who first amputated a limb for other cause than gangrene. Among the ancient surgical writers we find no mention of any such operation. Their idea was simply to separate dead parts, incising through them only, and trusting to the cautery to destroy what was left up to the still living tissues. In the Book of Deuteronomy, however, it is commanded that as a punishment for a certain immodest act, the hand of a woman should be cut off; and in the Book of Judges the maiming of captives by cutting off their thumbs and

great toes is spoken of as having been done in seventy-one cases. In neither instance is there any explanation given or comment made, and we are left to infer that operations of this kind were unfamiliar to those who received and preserved these writings. One can scarcely help speculating whether the civilization of the ancient Egyptians, Persians, or Hindoos may not have included surgical skill in the treatment of the accidents met with by those engaged on their vast architectural works. That they had mechanical knowledge which perished with them cannot be doubted, yet this must have been familiar to great numbers of workman, and continually seen by the people, whereas medicine and surgery, being in the exclusive possession of the priestly or other privileged classes, and being of necessity private in their exercise, would have been far more likely to have been lost with the decadence of the nations. Perhaps we are too ready to assume that a basis of anatomy and physiology must have been wanting to any such ancient system of surgery, although the tendency of the religious beliefs of that day, so far as we know them, was strongly opposed to the desecration of the human body involved in its dissection. Possibly there were burnt in the Alexandrian Library records which would show that our most recent improvements are really only revivals of things familiar to the physicians of the Pharaonic times. All this, however, is of course mere conjecture.

With the loss of simplicity in habits of life, with the introduction of fire-arms, and in the present century with the invention of steam machinery, the occasions of amputation have very largely increased, and improvements in its mode of performance were inevitable. But not one of these changes has equalled in magnitude the first step—the demonstration that a diseased or injured limb might be removed without waiting for its death, and that by this removal the life of the whole organism as such might be preserved.

In connection with the subject of amputation, and recurring for a few moments to the checking of hemorrhage after it, let me remind you that both Galen and Paul of Aegina advise that if a wounded vessel be large it should be seized with a hook, stretched, and twisted moderately. It seems to me that this expression could hardly refer more distinctly to the tenaculum as we now have it; yet by some modern writers the invention of this instrument is credited to Bromfield, in the last century.

And let me digress for a few moments to refer to certain improvements which, while valuable, cannot be regarded as great steps in the true sense of the term. One instance only will suffice.

Paré figures what he calls "the crow's beak, fit to draw the vessels forth of the flesh, so that they may be tied." This instrument was merely a pair of nippers with flat blades, ridged or roughened at their inner sides near the ends, so as to give them a secure hold. The opening and closing of the blades required a separate movement of the hand. Le Clerc speaks of forceps having a spring, or the *valet à patin*, this latter being a ring slipped down over the blades, so as to keep them closed. The spring was perhaps the invention of Assalini. Then it occurred to some one to make the two branches spring outward, so that the instrument was open unless pressed together. A further advantage was gained by adding a slide, so that the blades, brought together by pressure between the thumb and finger, could be fastened thus, the whole process being effected with one hand. And by making the ends bulbous, the risk of including the instrument in the ligature was done away with. For special purposes, the ends were very early made toothed.

Now, here was a succession of improvements, resulting in a very perfect instrument, having a very wide range of application; and yet neither the whole process nor any one of its successive steps could be at all regarded as a great advance in surgery. There was no great principle involved in either the construction or the use of the instrument; it was a mere device for subordinate purposes.

To return for a moment to the subject of amputation. When the idea was conceived that the soft parts might be so divided as to insure an ample covering for the bones, it was so much of an improvement as almost to come within the range of our great advances in surgery. But it was not new; it



was only a suggestion for the carrying out of a principle which was abundantly recognized already. And the same may be said of the flap method, with all its subsequent modifications; the admirable stumps so often obtained by the circular incision, when properly carried out, have not been surpassed by the results of operations done with the flap, which in fact has only the advantages of greater convenience, of more rapid execution, and sometimes of adaptability.

The introduction of excision of bones and joints was properly a great step in surgery. Its history is curiously like that of some other operations of high value. Filkin, who in 1762 excised the knee-joint, was without followers for nearly twenty years, when his procedure was imitated by Park, with a success which made him an enthusiastic advocate of the measure, and led him to extend its use to the other articulations.

I shall next refer very briefly to a great step in advance, made by one of the ablest men who has ever adorned the profession of medicine. When John Hunter, in 1785, tied the femoral artery for a popliteal aneurysm, he initiated a practise destined, in various forms, to be of vast service in the treatment of a disease for which there had previously been no known remedy. He based the procedure upon a thorough knowledge of anatomy, and upon the most philosophical reasoning; and since his first attempt, which was crowned with brilliant success, the labors of subsequent surgeons in this field have been almost altogether in the direction which he indicated. Instrumental compression, digital compression, and other modifications of means for carrying out the great principle which he laid down, have as yet yielded the best fruits.

The address continues with reference to the more modern advances in surgery, as ovariectomy, anæsthesia, etc.; etc.

### THE RELATIONS BETWEEN TUBERCULOUS JOINT DISEASE AND GENERAL TUBERCULOSIS.

By FREDERIC S. DENNIS, M.D., Prof. of Surgery, Bell. Hosp. Med. Coll., New York.

From the *N. Y. Med. Jour.*, December 27, 1884.—Recently pathologists have proved that joint disease in the great majority of cases is primarily due to tuberculosis, and that traumatism is either only a secondary factor in the causation, or, if it is ever the primary cause, the cases are very limited in number. This radical change of opinion in regard to the ætiology of joint disease has not yet been accepted by some surgeons. The object of the present paper is to present some microscopical and pathological specimens which show beyond peradventure the tuberculous origin of joint disease, and at the same time to discuss the relation between tuberculous joint disease and general tuberculosis.

By a tuberculous joint is meant one in the different tissues of which the *Bacilli tuberculosis* of Koch are present, though it does not always follow that they can be found; and by general tuberculosis is meant acute miliary tuberculosis. The *Bacilli tuberculosis*, which are the infective agents, are developed in a central focus, and the focus in the majority of the cases consists of a broken down, caseous lymphatic gland, and from this focus dissemination of bacilli proceed and cause acute miliary tuberculosis. Another term for the caseous lymphatic gland is scrofula, and hence it is apparent that scrofula acts by furnishing a suitable soil in which the infective agents develop. It does not come within the province of this paper to discuss the relation of scrofula to tuberculosis; but it will suffice to state that pathological experiments and clinical history prove without doubt that an intimate relation exists between these two affections. Tuberculous joint disease, however, can develop primarily without the presence of scrofula, or the joint disease can be secondary, as when metastasis occurs from an organ in which infective agents are present.

A knee joint may become primarily attacked by tuberculosis without any other focus; this condition has been seen in autopsies, although it is rare in proportion to the number of cases in which the joint disease is the result of a metastasis.

In a recent contribution Professor Volkmann made an analysis of two hundred and fifty cases of excision of the hip for joint disease, and could find in the entire number only five or six cases which were not tuberculous. Koenig relates a case where a resection of the knee was performed for tuberculous joint disease. The wound was aseptic, and, two weeks after the resection, symptoms of acute miliary tuberculosis were well pronounced. The patient died, and the autopsy revealed the presence of miliary tubercles in nearly all the organs of the body.

Acute miliary tuberculosis has followed in a limited number of resections, which suggests at once that any operation which has for its object the destruction of a central focus must be early, thorough, and complete.

These clinical facts clearly prove that there must be a causative relation between tuberculous joint disease and general tuberculosis; but exactly what this relation is, and how it is to be scientifically defined, are questions most difficult to answer in the present chaotic state of our knowledge of tuberculosis.

Tuberculous joint disease behaves like carcinoma and sarcoma in the dissemination, and the analogy in the clinical history still is observed. In support of the view of the local origin of these diseases, I might cite at least a dozen cases upon which I have operated, and of which I have carefully preserved the notes, which indicate that notwithstanding what variety of malignant disease is found, early interference may prevent general infection and death. These tumors were all carefully examined by Professor Welch, who pronounced them malignant.

In the tuberculous joint disease my experience accords with what has already been said in regard to malignant tumors—that early operation will prevent dissemination, and that the disease at the outset is purely a local infection. The number of cases operated upon justifies the statement that early and thorough operation, or, what is better, treatment which is directed to the management of the local infection, is attended with excellent results.

The questions for discussion are these:

*First.* Does a joint become the seat of a scrofulous affection absolutely and *in toto* because the bacilli are there from the very outset, and consequently, give to it the characteristic inflammation? or,

*Second.* Does a joint become inflamed as a result of traumatism, and then a simple traumatic synovitis or arthritis become converted into a tuberculous joint disease on account of the entrance of the *Bacilli tuberculosis* from a broken-down cheesy, scrofulous gland into an already inflamed joint.

The conclusions which I would draw clinical histories, from cases and from specimens are these: *First*, that acute miliary tuberculosis is an infectious disease, which disseminated through the body from a central caseous focus.

*The second conclusion* is that the removal of scrofulous, cheesy, broken-down glands, with a central caseation, which are frequently the starting-points of general tuberculosis, is a means of eliminating one of the chief sources of general tuberculosis and tuberculous joint disease. This second conclusion, I am aware, will not be accepted by some surgeons in this audience; but still the evidence is beyond doubt in the minds of those who have given the subject thoughtful study.

To summarize, the line of argument is this: that—(1) Scrofulous abscesses are dangerous, because in them *Bacilli tuberculosis* may develop, and from these abscesses, as infective foci, general dissemination may proceed in the form of acute miliary tuberculosis; (2) That tuberculous joint disease can produce general infection, or acute miliary tuberculosis; (3) That traumatism may act as one of the many exciting causes to develop tuberculous joint disease, provided the conditions are favorable; (4) That traumatism alone will not develop tuberculous joint disease except where certain conditions are present.

#### THE MANAGEMENT OF PATIENTS DURING ETHERIZATION.

By H. L. BURRILL, M.D., of Boston.

From the proceedings of the *Boston Society for Medical Observation*.—The patient who for the first time subjects himself to anæsthetization is usually

filled with apprehension. He has heard that deaths have occurred under ether; of the horrors of suffocation inflicted during etherization, by surgeons crowding the ether; and that occasionally patients cannot be brought under the influence of the anæsthetic. He is to have an operation performed, a matter of great moment to most people. His life is in danger. He feels that he is passing through a crisis in his existence and all of his faculties are strained to their highest tension. Patients meet this situation with varying degrees of fortitude. They are in a helpless state, in which they place themselves in the keeping of another. This person is selected for his skill, experience, and good judgment. The surgeon for the time being holds an exalted position in the patient's mind. His every act, look, and word are noted and largely influence the patient's feeling of security.

As a result of this consideration we have certain propositions which I take it all will accept. They are:—(1) Before etherization, the surgeon should satisfy himself regarding the presence or absence of heart disease; (2) The safety of the patient and the comfort of the etherizer largely depend on the use of pure anhydrous sulphuric ether; (3) the best medium for the administration is one in which the ether can be given in a condensed form or largely mixed with air; (4) As a rule the patient should have a brief, clear description of the sensations he is about to experience; (5) A room free from bustle and confusion before and after an operative procedure is an essential for quiet etherization; (6) Ether should be administered on an empty stomach; (7) The knowledge of the effect of a glass of wine upon a patient is frequently an indication of the exciting or stupefying that ether may have; (8) No mechanical impediment should exist to respiration; (9) The pulse and respiration are the safeguards of etherization; (10) The less ether used in an operative procedure, the better the recovery of the patient from the immediate effects of the operation; (11) A little ether in children goes a long way.

#### AN AUXILIARY METHOD FOR THE REDUCTION OF DISLOCATIONS.

By H. ARTHUR, M.D., of Pittsburgh, Pa.

From the *Med. and Surg. Rep.*, January 24, 1885.—Many theories have been advanced to explain those causes and hindrances which sometimes make the best efforts to reduce a dislocation futile. The obstacle to the reduction has been looked for, especially by the older surgeons, in the contraction of the muscles. The defenders of this theory thought if they could paralyze the muscles they would be able to reduce any and every luxation. But the falsity of this theory has long ago been made apparent by the fact that in some cases the dislocations of joints (artificially produced) on the cadaver could not, in spite of expert efforts, be reduced; further, in some cases all the tendons of the muscles that could make any resistance were severed with the knife, yet the reduction was impossible; besides, in later years, the administration of anæsthetics has proven beyond all doubt that this theory, seeking the sole cause of hindrance in the contraction of the muscles cannot hold good.

The principal hindrance, Malgaigne (as cited by H. B. Schindler) thought, was to be found in the friction of the dislocated head and the underlying bone.

Others looked for the difficulty in the capsule itself, and here there are different conditions possible.

Again, undoubtedly, there are cases in which a tendon or a bundle of muscular fibres, or a sesamoid bone, or all, as easily imagined, get between the articulating surfaces and make reduction difficult or impossible.

After E. H. Weber's discovery, that atmospheric pressure was a factor in retaining the head of a bone in its socket (for instance, the hip-joint), Voelkers, of Germany, maintained that this was the only obstacle we had to contend with in the treatment of dislocations.

Further, when swelling and inflammation of the region of the joint are present, they in various ways constitute a formidable drawback to reduction.

Anæsthetics are quite safe, but not absolutely so. My experience with chloroform has put me on "my guard." I have seen three deaths occur while the operation was being performed, death in each case being superinduced by the anæsthetic. [The man who has had three cases in which death was produced by the same anæsthetic, should benefit the profession by resigning at once. Abandon the use of chloroform, as an anæsthetic, entirely, and it will not kill any one.—Ed.] The operation each time was performed by our professor of surgery, and the anæsthetic administered by expert assistants.

The fact that local anæsthesia can be brought about by pressure is generally known.

That shrinkage actually takes place (as it can theoretically be expected) I have proven to the satisfaction of myself, by actual measurements made of the circumference of an extremity, before and after the application of the bandage. The question arises with us, of what value is this shrinkage in luxations? It is plain that if pressure will lessen the size of all the tissues brought under its influence, then not only swelling that may be present will partially or entirely disappear after applying pressure, but also the natural size of the tissue will be reduced. It follows then that the general swelling of the tissue, which will be reduced in size, will shrink and make the way for the returning head of the dislocated bone more spacious and easy to traverse.

Any method which consists in the application of an Esmarch or an India-rubber bandage in the same way as Esmarch has recommended for amputation and sequestrotomy, has for its object first, to reduce swelling (cause shrinkage); second, to create partial or complete anæsthesia; third, to throw the muscles out of action.

To gain this object the bandage must be tightly adjusted, and its central or upper end must be brought to bear on the origin of those muscles that may pass to or beyond the dislocated joint. The method can be applied only to those joints peripheral from the shoulder and hip-joint. No physician need have any fear whatever to apply the elastic or rubber bandage as tightly as it lies in his power.

Those cases reported from Langenbeck's clinic and elsewhere, where damage was done especially to the nerves, were due to the use of the flat *tube* as originally applied by the inventor. This tubing has been discarded in Germany, and the rubber bandage adopted in its stead. [Still, it is not unwise to accept the above statements with a certain degree of allowance.—Ed.]

The indications for the use of the elastic bandage are: (1) In those cases where a diagnosis is not possible owing to the swelling. The swelling resulting from dislocation is usually very painful, and an anæsthetic should always be used. (2) Where, after repeated attempts with or without an anæsthetic, the reduction was not successful.

It seems to me the results with this method will be particularly gratifying when applied to the luxations of the smaller joints. (It is estimated by the different authors that from one-third to one-half of the dorsal luxations of the thumb are irreducible without an operation.)

Aside from the object of this method, we think it ought to be applied in those cases indicated above, for the following reasons: (1) There is only ordinary skill necessary for its application. (2) It can be applied in from five to fifteen minutes. (3) It leaves *no injury behind*. (4) We will by this method, in nearly all cases, save the patient the pain and risk connected with an operation that is, at its best, doubtful in its results.

We admit that this method is painful; yet if the indications above set forth are strictly adhered to, the question of pain cannot be taken into consideration.

## BONY UNION AFTER INTRACAPSULAR FRACTURE OF THE FEMORAL NECK.

By JOHN B. ROBERTS, M.D., Surgeon to St. Mary's Hospital, Philadelphia.

From a paper read before the *Philadelphia County Medical Society*.—Much has been said against the possibility of osseous repair occurring after intra-

capsular fractures of the neck of the thigh bone. It is probable that this teaching has induced more than two-thirds of the general medical profession to believe that bony union of such lesions never occurs. Careful investigation of cases and specimens by competent surgical observers has conclusively demonstrated that such belief is erroneous. Bony union does occur, though not frequently. In my opinion, moreover, its non-occurrence is to some extent due to the violent and unjustifiable manipulation to which injured hips are often subjected, by reason of the attendant's ignorant desire to demonstrate crepitus and preternatural mobility. The diagnosis can usually be made with reasonable certainty without the development of these symptoms of fracture. Therefore, it is unnecessary and improper to imperil the future usefulness of the limb merely to arrive at an absolute diagnosis. In cases of doubt it does no harm to treat the case as one of fracture, even if none exist; but violent manipulation, by tearing connecting bands of periosteum or detaching the impacted fragments, greatly reduces the probability of union.

Union *may* be bony, and the function of the joint perfectly or almost perfectly restored; if not bony, the bond of union *may be* a very short, fibrous one, giving as good functional result as osseous repair. Hence, the surgeon should treat his cases as if he expected a good cure; for it is impossible to say that a given patient is one in which no attempt at union will take place. Non-union of intracapsular fracture of the hip is, it is true, often found. Let us not expect this, however, as a rule, for then we may be led to neglect proper therapeutic measures.

I have made these prefatory remarks to introduce the clinical history of a patient (a woman 78 years of age) who has now good use of her limb subsequent to an intracapsular fracture, although treatment was abandoned shortly after the receipt of the injury. She has probably a short fibrous union; possibly a true bony one. In either event, however, the result is gratifying; and teaches that such cases should not be looked upon as necessarily hopeless in respect to union.

#### THE MANAGEMENT OF THE ABSCESES OF HIP DISEASE.

By A. B. JUDSON, M.D., Orthopædic Surg. to the Out-Patient Department of the N. Y. Hospital.

From the *N. Y. Med. Jour.*, Jan. 31, 1885.—The present paper is founded on the study of a number of cases of hip disease in which the discharge of pus was a prominent feature. I have excluded those cases in which there was reason to believe that the pus was the product of inflammation of the soft tissues alone, and have included only those of insidious and destructive hip disease, which begins in the bony tissue and pursues a slow and baleful course through the structures of the joint until the usefulness of the part and the symmetry of the body are compromised.

These cases stand over against a class of cases of osteitis of the hip in which abscesses did not occur, or, if they occurred, took the form of fluctuating tumors, which were absorbed.

If it is possible for abscesses to be prevented by treatment, it would seem that the measures adopted in the cases under consideration might reasonably be expected to prevent suppuration in those cases in which it had not already set in. The treatment pursued has been based on pathological conceptions which may be expressed as follows: A centre of inflammation appears within the bone and slowly spreads, accompanied by hyperæmia and softening, until the shell of compact bone is perforated, and all the tissues of the joint are involved in the inflammatory softening and disintegrating process. We will leave out of account the questions of the strumous element and the pernicious effects of reflex muscular action. However these questions may be viewed ultimately, there is no doubt that the disease, in a great majority of instances, comes to a natural, not fatal termination, as is evidenced by the common expressions, "Nature's cure" and "the natural cure" of hip disease.

Given these pathological elements, treatment presents itself as a matter of course as follows: 1. The increased vascularity attending inflammation

in the tissues of the joint requires arrest of motion in the joint, or fixation. 2. The softening of the bony tissue and its increased fragility require that the joint be relieved from the weight of the body in standing, and the direct concussion transmitted up the long bones of the limb from the heel in walking and running. 3. As the cure is to come by natural processes, it is important that the general condition be kept at the highest possible point of excellence. The patient should, therefore, be active out of doors, and enabled to follow the ordinary pursuits of his time of life.

These difficult requirements are so well met by the use of the hip-splint, properly constructed, rightly adjusted, and worn day and night, that the pain attending the disease is mitigated, the duration of the affection is shortened, and the extent of its ravages limited, and it is surmised, with a fair degree of probability, that, in certain cases, abscesses have been prevented, and deformity, so liable to follow, is largely prevented by its persistent use.

At the first glance it would seem that the prevention of abscesses in this disease is extremely desirable. In practice, however, it has been found that a comparison between those cases of osteitis of the hip which are free from purulent discharges and those in which such discharges occur brings to light several circumstances which take away the dread of abscesses, and make their occurrence, if not a desirable event, at least an evil attended with compensating advantages. Their occurrence appears to shorten the duration of the affection. The degree of deformity following treatment depends in no way on the presence or absence of purulent discharges.

It follows, then, that the abscesses of hip disease are not to be considered dreadful precursors of a fatal result. There is no evidence that the discharge, as such, exhausts the strength of the patient. This tradition, like many another, is disproved by experience. The general condition of the patient remains good, and not infrequently it is robust.

In regard to the treatment of the abscesses of hip disease, the histories of the cases under review indicate that the precept that pus should be released by an early and free incision is a rule which is not to be always followed.

It can hardly with reason be supposed that the processes, either destructive or reparative, which take place in the bone in the progress of this disease, can be affected by incisions, local medications, dressings, the introduction of drainage-tubes, the injection of antiseptic fluids, the distension of the sac of the abscess, or the use of the faradic current as a means of hastening supuration, when we consider that purulent collections, sinuses, and discharging fluids are but phenomena of the soft parts, secondary in every sense to the changes taking place in the bony tissue. If the collection of pus were the starting-point or the main feature of the disease, an early and free incision, as for a furuncle, would be admissible. But in hip disease the trouble is primarily and chiefly a disease of the bony tissue composing a joint, which is best treated generally by the administration of tonics and the regulation of the hygiene, and locally by fixation and protection from violence. If abscesses occur, it is shown by experience that the retention of pus, even in large quantities, or the presence of a purulent discharge, does not prevent the process of repair.

In the progress of one of these cases of prolonged suppuration the question of an incision for the release of pus will often arise. While I have seen no case in which such an incision has done harm, I have also seen no case in which it had a positive controlling influence for good generally or locally. If the physician has the opportunity, he may relieve the tension and allay pain by an incision.

If the physician chooses to regard himself as a military commander, let him control the bone disease by fixation, protection, and hygiene, and the abscesses and sinuses will not require the bistoury and drainage-tube.

#### CHRONIC OSTITIS OF THE HIP.

By V. P. GIBNEY, M.D., Prof. of Orthopædic Surg., N. Y. Polyclinic.

From the *Medical Times*, Dec. 13, 1884:—In studying comparative results, I am forced to the expression of the following convictions: (1) The

"expectant" treatment is not, in an orthopædic or surgical sense, any treatment at all. Cases that have no medical or surgical attendance whatever are followed, so far as my own observation goes, with just as good results. (2) Traction with motion is based upon a false pathology, and does not, in my opinion, do what its advocates claim for it. The motion is certainly not as great, as a rule, as one would be led to expect. (3) Fixation and rest, when properly carried out, yield better results, I believe, than any other plan. (4) The key-note in the treatment of ostitis of the hip is not the splint employed, not the crutch, or the high shoe, but it is the management of the case. Some men can get admirable results with any kind of splint. The case must be closely watched, the apparatus must be kept fully up to its duty, the indications must be met, and one must not grow impatient, because time is an important factor.

Let one be early impressed with the tediousness of the case, and let him also make up his mind that the case must be managed rather than treated with any special form of apparatus.

### THE CAUSE OF NEURALGIA.

By ROBERT REYBURN, M.D., Washington, D. C.

From the *Maryland Med. Jour.*, Dec. 6, 1884.—In speaking of the cause of neuralgia, I refer more especially to the chronic form, and not that dependent upon acute or local causes.

Probably every physician in active practice, knows by a fore-knowledge, born of repeated experiences, that when the atmospheric conditions are favorable to its development, there exists a class of patients who, he feels certain, even before he visits them, will be suffering from some one or the other protean forms of neuralgia. Is this condition of things, so constantly occurring, merely a coincidence, or is it dependent upon a cosmical or universal cause that can be traced by its effects?

I do not think that this can be a coincidence, for it recurs entirely too constantly to be susceptible of such an explanation.

Dr. S. Weir Mitchell, in his very instructive and valuable article published in *The American Journal of the Medical Sciences*, for April, 1877, p. 805, has shown that when the atmospheric pressure is lessening and the mercury is falling, the neuralgia occurs during the fall of the mercurial column and before it is complete.

The rain precedes this greatest depression of the barometer, being in advance of it 350 to 600 miles.

Before and around the rain storm lies the neuralgic margin, or border of the storm, and which precedes the rain storm by about 150 miles.

The facts above stated can be easily demonstrated by the records of the Signal Office, and assuming their correctness, I believe that the following is a simple explanation of the connection between these phenomena:

*Ganot's Physics*, Am. edition, p. 107, says that the superficial extent of the surface of the body of a man of medium size is about 16 square feet, the total amount of atmospheric pressure on the surface of the body is consequently about 35,000 lbs. (34,560).

Taking the average height of the mercurial column as 30 inches, a fall of only one inch, shows that 1-30 of the pressure of the atmosphere is for the time being removed from the surface of the body or more than half a ton, and a fall of less than two inches will removed a ton of pressure from the surface of the body.

The necessary result of this condition of things is that a much greater pressure is exerted upon the blood vessels, and more especially upon the smaller arterioles and capillaries, and which, from the sparsity and in the case of the capillaries, the entire absence of muscular or elastic fibres, in their walls, are ill-adapted to withstand such increased pressure from behind.

But the mischief done does not end with the passive hyperæmia produced; these engorged blood-vessels are accompanied and surrounded by an enormous development of nerve filaments, which are pressed upon, and being function-

ally disturbed by this pressure, we have as a necessary sequence, the development of neuralgic pain in the part.

We find also, other things being equal, that neuralgia chiefly affects those parts of the body that are abundantly supplied with a vascular net-work, and which are unprotected by clothing, thus exposing them to changes of temperature. This explains why so many cases of neuralgia are found existing upon the parts of the face supplied by the fifth or tri-facial nerve.

The obscure pains so commonly observed before storms, in old wounds, inflamed joints, and other organs, which are commonly referred to rheumatism, are easily explicable by this theory of increased vascular congestion, the vessels in chronically inflamed parts are always enlarged, and the diminished atmospheric pressure upon the outer surface allows the vessels to become more dilated, and hence pain is produced.

### INGROWING TOE NAIL.

By J. GREGG SMITH, M.D.

From the *Cincinnati Lancet and Clinic*, Jan. 24, 1885:—*Definition*.—A chronic, painful, traumatic inflammation of the tissues at the margin of a toe-nail. The inflammation is usually attended with the formation of granulations and with suppuration, and it is nearly always of the great toe-nail, usually on its outer side.

*Causation*.—In civilized countries, we must always recognize the element of compression, or at least prevention of expansion inside a boot. It is perfectly conceivable that the condition might exist in individuals who never wear boots, but for practical purposes we must take the boots for granted. Looking beyond the boots, we find that the causes may be arranged as intrinsic, or depending on peculiarities in the toe or nail, and extrinsic, or dependent on the direction of the toes or the condition of outlying structures in the foot.

I. INTRINSIC, *i. e.*, in the nail, or in the surrounding tissues, or in both. (1) *In the nail*. In some people, the nails in the fingers and toes—and I have noticed that the peculiarity is usually coincident—are convex or arched, and dip deeply into the surrounding flesh. In such cases, in paring the nail there is frequently left behind a small pointed piece, which readily insinuates itself into the neighboring flesh. Matters are sometimes made worse by pulling at this piece, “tearing it to the quick.” (2) *In the flesh*. Some people have a redundancy of flesh in their toes, and their fingers as well. In these the flesh overlaps the nail, and in the foot the confinement of the boot, added to the soddening perspiration under the overlapping flesh, readily starts the condition. Once started it continues, and suppuration along the margin of such a toe may continue for years. (3) *In both nail and flesh*. The existence of both the above conditions will frequently be found associated with the malady. Alone, or in combination with extrinsic causes, this double condition, with the mere wearing of boots, is almost enough to cause this complaint.

II. EXTRINSIC, or from causes lying outside the nail and its surrounding tissues. (1) *Flattening of the arch of the foot*. Flatfoot, in varying degrees, I believe to be the most important cause of in-growing toe-nail, and all the more so that the ordinary modes of treatment are futile to cure it. It is simply flat-foot, pes planus, and not splay-foot, or pes valgus, which is most likely to start the mischief. And it has seemed to me that not the worst cases of flat foot—those which require operation—but the moderate cases, which require no special treatment for the flattening, are chiefly associated with in-growing nail. (2) *Eversion of the great toe*. The production of this condition, I believe, will be most frequently found to depend either on a habit of walking with the limb much rotated outward, or on a congenital deflection of the toe itself. (3) *Inversion of the lesser toes*. In this case the same result as the preceding is produced by a deviation inward of the second and third toes. How it is produced I do not know.



*Treatment.*—I. (1) Where the cause is intrinsic and resident in the nail alone, it may usually be remedied by careful attention to the "toilet" of the nail, using a knife rather than a scissors, and cutting from behind forward obliquely, so as to give the nail a pointed shape. If the granulations are exuberant, I would recommend the application of a crystal or two of chromic acid, which leaves a hard, dry scab, under which the sore heals kindly. Careful trimming of the nail will usually ward off the complaint in future. (2) Where the cause lies in a superabundance of flesh in the toe. First, the application of chromic acid, if necessary, and therefore pressure, either by strapping or by elastic. Every night the affected toe is to be surrounded tightly from the tip upward by thin strips of adhesive plaster taken out of boiling water. This may be removed in the morning and replaced by an india-rubber cap, such as is worn over a sore finger. The toe is thus rendered and kept anæmic by compression; congestion is removed, and the tissues get more firm and resisting in the course of a few months.

In such cases, I have sometimes noticed that the feet perspire freely, and then the wearing of fine worsted socks, the nightly use of a foot-bath, into which enough sulphuric acid has been poured to make the skin tingle, and sprinkling some powdered boracic acid over the foot every morning will expedite the cure. (3) When there is a combination of malformed nail and overgrowth of flesh, a judicious combination of the methods just described will probably effect a cure. Here, if anywhere, a scraping of the nail, making it thin and yielding, ought to do good; but I am doubtful of the utility of this procedure. If all these or similar plans fail, there is nothing for it but removal of the nail in the manner to be described presently.

II. (1) Of intrinsic cases by far the most important is flattening of the arch of the foot, and unless this cause is clearly recognized and successfully met, our treatment will almost certainly fail. In actual practice it will be found a very efficient plan to wear a small pad of several thicknesses of chamois leather or flannel under the ball of the great toe. The toe, thus elevated beyond the reach of harm and relieved from its illegitimate labor, soon regains its normal condition. (2) When the cause is eversion of the great toe, from whatever cause arising, the treatment is by no means easy. What I have found most satisfactory is a pad between the great and second toes, stopping short of the sore part. (3) I have seen only three cases of the second and third toes overlapping the first, and causing ingrowing of its nail. In these the condition was easily remedied by wearing a double band of tape, so arranged as to keep the two offending toes turned outward and pushed downward.

So much for the scientific treatment of the complaint. But there is a class of cases, in which imperfect intelligence and want of cleanliness nullify our efforts. For all these, I remove the matrix as well as the nail, and scrape the periosteum off the bone. The operation is certain to cure permanently every case of the disease.

I confidently recommend the procedure as far preferable to mere avulsion of toe-nail, a plan of treatment which, in my opinion, ought to be abolished from surgery.—*British Medico-Chirurgical Journal.*

## COMBINED TUBULAR AND CAPILLARY DRAINAGE OF LARGE WOUNDS.

By W. W. KEEN, M.D., of Philadelphia.

In a paper read before the *Philadelphia Academy of Surgery*, Dr. Keen directed attention to a method which he had practiced with excellent results.

The chief advantage of tubing is its free discharge. Its disadvantages, in addition to that noted above, [obliteration of their (rubber) calibre by pressure, as in a joint; decalcified bone not seldom softens and collapses, and sometimes is not aseptic] is that if used for any length of time, when removed, it leaves a tubular passage of considerable calibre lined with granulations. This passage if long, as in large wounds, is often apt to close at two or more points in its course, thus penning up the slight discharge and pro-

ducing retention and suppuration. The disadvantage of the capillary drainage is that it is not fitted to give exit to large amounts of fluid. Its advantage is that it leaves no such tubular passage, but that while giving us the means of introducing tubing for freer drainage, if at any time it is needed, it allows nearly complete healing, even while a few of its strands are still *in situ*. Especially is this of value in larger wounds with long drainage paths.

The method referred to is as follows: When the wound is ready to be closed, a fenestrated rubber drainage-tube and a bundle of horsehair of fifteen to thirty or more strands are both placed side by side in the wound. At the end of twenty-four or forty-eight hours the abundant oozing of bloody serum usually necessitates a redressing, but by this time the first abundant discharge has ceased. Accordingly at the first dressing after the operation I remove the rubber tube, leaving the horsehair in place. If the oozing will probably be small, I often even remove a large part of the horsehair. At the second dressing, say in three to six days, I remove all the horsehair or all but two or three strands. In doing so I always remove the hairs one or two at a time, as the nice adjustments of the surfaces is thus scarcely at all disturbed. At the third dressing, if all has gone well, the last horsehairs are removed and the capillary passage heals within twenty-four hours.

For joints or in other wounds where possible longer slight discharge may take place, the horsehair may be left for longer periods as judgment dictates.

I have used this method in amputation of the breast, often bringing tubing and horsehair out through a button-hole counter-opening in the axilla and treating it as described above. I have used it in a large number of amputations of the upper and lower extremities and in the removal of tumors of the neck and other parts of the body and find it to work admirably.

While speaking especially of rubber tubing and horsehair, this method of combined drainage will answer equally well with any of the other materials mentioned, and it is to the *method* that I particularly design to call attention rather than to the material used.

#### GUIDING PRINCIPLES OF SURGERY.

From an editorial in the *Detroit Lancet*, Dec., 1884.—But we do not care to discuss this matter now, only to direct attention to it by giving the utterances of Dr. Thomas Bryant of London, in a lecture published in the *Med. News*, Nov. 1. He says: "If you are not sure of doing good, be very sure that you do no harm. The patient may die, but take care that he does not do so from any act of yours. Never be tempted to perform an operation from the pleasure it may afford you, or the benefit its performance may do you in the eyes of your neighbors, or the whip it may perhaps give you over a brother, and possibly a rival practitioner. The surgeon should never deviate from these rules in order to gratify a fancy or a desire to perform a named or favorite operation. He is never to look at his patient or the disease with a purely operative eye, which may suggest that the case before him is a good one for this or that operation, but to view it in a broad and clinical aspect, and solely with the necessities of the case before him. He is ever to look upon the case from his patient's point of view, and from no other, to do from necessity what the necessities of the case require, and to do what has to be done in the simplest and safest way.

Ever remember that patients are not subjects, but living human beings, with all their feelings, anxieties, responsibilities, and hopes, and that the great Christian principles of doing unto others what we would they should do unto us, is applicable in the practice of surgery as it is in the performance of the general duties of life. At any rate, gentlemen, if you let these principles of practice be your guides for the future, I can with confidence assure you that you will be travelling in the right road, and that in life you will win, as you deserve, success."

It would be a happy medical profession if each surgeon would even try to practice these principles. But, alas! poor human nature is too weak, and hence the present state of things which each can at least see in others, if not in himself.

## THE TREATMENT OF ERYSIPELAS.

By G. FRANK LYSTON, M.D., of Chicago, Ill.

From the *Western Med. Reporter*, Jan., 1885.—Dr. HUMPHREYS, in the *Nashville Jour. of Med. and Surg.*, recommends *iodized collodion* made according to the following formula:

R. Aether sulph., alcoholis,  $\text{ss}$   $\frac{3}{4}$  x; pyroxylonis, 3 ii. M. Salve et adde.  
R. Ammonii iodidi, 3 ii  $\frac{1}{2}$ ; cadmii iodidi,  $\frac{1}{2}$  ii; cadmi bromidi,  $\frac{1}{2}$  ii.  
M. Sig.—Apply with camel's hair brush. P. R. N.

The constitutional treatment is not neglected by the author.

It would be difficult to appreciate the advantages of the iodized(?) collodion over the ordinary form which others have recommended in erysipelas. It would seem disadvantageous to mix the iodides with the collodion, if dependence is to be placed upon its contractile and refrigerating properties, as they must certainly be impaired by such admixture. We very much doubt the antiseptic powers of solutions of the iodides, except they be used internally, or in such a manner as to liberate free iodine. The solution might as well be termed bromized collodion, as it contains that ingredient, and bromine is a far more powerful antiseptic than iodine. That the salts of bromine, however, are antiseptic, we greatly doubt. For our own part, we have not been led to entertain great faith in either the antiseptic or refrigerant treatment of erysipelas.

The rational therapeutics of erysipelas may be formulated as follows: 1st. Constitutional support by iron, (we prefer the salicylate to the chloride), quinine and dietetic measures, alcoholics being in a large number of cases a *sine qua non*. The old-fashioned treatment with calomel and opium, the former in very moderate doses and the latter in amount sufficient to allay pain, is very efficacious in athenic cases, and particularly in the cutaneous variety. 2nd. Locally, the indications, are first, to exclude the air and light; second, to allay pain; third, to relieve tension and counteract the tendency to the formation of pus and sloughs.

In the simple cutaneous variety of erysipelas we meet with some few cases in which cold applications are very grateful, but in by far the majority of cases, hot applications are better. In facial erysipelas or in the cutaneous variety in any situation, applications of sheet lint saturated with hot *lotio plumbi et opii*, and covered with oiled silk should be made. In the phlegmonous and cellular forms, oakum poultices of tow, saturated with the hot lotion or even hot water, should be applied and the whole covered with oiled silk. These applications should be changed frequently. They fulfill indications 1st and 2nd. Indication 3rd should be met by multiple incisions in the affected part through the skin and cellular tissue. These should be from one to three inches in length. Bleeding is to be encouraged by warm fomentations, and is never severe. Finally, the oakum poultice should be applied. We can say from a large experience in the management of the worst forms of erysipelas, as seen in public institutions, that we have never known a patient to die from uncomplicated phlegmonous erysipelas when this line of treatment was thoroughly carried out. In fact suppuration and sloughing were rare. By contrast with cases treated in a less radical manner, such results were remarkable. When such a line of treatment is not followed, there is nothing more tedious than the management of phlegmonous erysipelas. Troublesome sinuses, prolonged suppuration, extensive ulcers and cicatrices, and often death from exhaustion or septicæmia, are among the results obtained by expectancy.

## THE CONSERVATIVE TREATMENT OF SUPPURATIVE ARTHRITIS.

Dr. C. B. NANCREDE, in a paper read before the *Philadelphia County Medical Society*, gives briefly the notes of two cases; one an incised wound of the knee-joint, the other a case of suppurative arthritis of the wrist-joint. With regard to the first case Dr. Nancrede says: "Perfect quiet of the joint from the moment of the reception of the wound, its disinfection and subse-

quent antiseptic dressings, aided by cold, would doubtless have obviated all the subsequent danger and suffering."

In conclusion the author says:—I would again reiterate that free incision, drainage and rest, combined with antiseptic treatment in its broadest sense, will, when judiciously followed by persistent passive movement and massage, often save not only life and limb, but an excellent joint.

### PLASTER OF PARIS AS A PERMANENT DRESSING IN DEFORMITIES OF PARALYTIC ORIGIN.

By J. MILLER, M.D., Prof. of Orthopedic Surgery in Kansas City Univ.

From the *Kansas City Med. Record*, Feb., 1885.—I desire to call attention to a practice that I believe to be injurious in a certain class of patients—viz., in all cases of deformity whose origin is in paralysis. The practice I refer to is the use of plaster-of-Paris as a permanent appliance in these cases.

There are other principles of treatment that should govern us in this class of cases, all of which should be carried out in cases requiring them: 1. Operation when necessary. 2. The mechanical principles of treatment. 3. The physiological. The last two principles are imperative in all cases of deformity of a paralytic origin.

The mechanical alone is insufficient, and the physiological is equally negative in its results. But it is by a combination of the two that we achieve success. If our mechanical appliances are of such a character as to restrain the natural movements of the muscle, its retrograde changes already mentioned are invited and will inevitably make their appearance, entailing all the disastrous sequelæ usually encountered when absolute rest has been enforced in any other way.

If these statements be true and are based upon scientific principles, then we may ask, Why do surgeons persist in the indiscriminate use of plaster-of-Paris as a permanent appliance in paralytic affections, such as club-foot, lateral curvature of the spine, and allied affections?

### THE DRESSING OF WOUNDS.

By GEO. HALLEY, M.D., Prof. of Surg., Kansas City Med. Coll.

From the *Kansas City Medical Record*, Feb., 1885.—Manipulating a wound surface in any way, beyond simply washing and thoroughly cleansing its surfaces, is a dangerous procedure, and one that will invariably be followed by bad results in the way of febrile disturbance and wound inflammation. In the hands, then, of the inexperienced, and those who have not familiarized themselves with the details of Lister's methods of dressing, it will be safer to dress often, two or even three times in the twenty-four hours, and wash the wound thoroughly at each time with hot water—not simply warm, but water that has been recently boiled and is still as hot as can be borne—than to trust to any carbolized solution or dressing left on for twenty-four hours or more. I am satisfied much harm is now being done, in dressing wounds, by careless attempts at following Listerism and Lister's methods. Wounds are washed with water that is impure, in which *some* carbolic acid is mixed, no matter how little, with the indefinite impression that all that is required to make a solution antiseptic is to add carbolic acid to it; and that a wound dressed with such a solution can be safely put up air-tight, without drainage, and left sealed up for an indefinite length of time.

Listerism had done a world of good in the treatment of wounds; it has saved thousands of lives. It has worked a revolution in modern surgery, but in the hands of careless or half-informed or thoughtless surgeons it is, and will continue to do great harm by just the ways I have pointed out. The remedy is, then, to invariably drain a wound that is more than half an inch in depth, wash and dress with water that has been recently boiled and is still as hot as can be borne, and dress it often. Rendering the bath for the wound antiseptic by adding carbolic acid, boracic acid, or any other substance, can do no harm, but they can never take the place of cleanliness and frequent dressings.

## RESPIRATORY ORGANS.

A CASE OF DIFFUSE ROUND-CELL SARCOMA, INVOLVING THE  
POSTERIOR NARES, VAULT OF THE PHARYNX, SOFT  
PALATE, PILLAR OF THE FAUCES, RIGHT TONSIL,  
AND LOWER PHARYNX; OPERATION; CURE.

By F. H. BOEWORTH, M.D., Prof. of Diseases of the Throat in the Bell. Hosp. Med. Coll., New York.

From the *Medical Record*, January 17, 1885:—The following case is presented as affording many points of great interest on account of its exceeding gravity, the extent to which the malignant growth had invaded the tissues of the fauces, the somewhat novel method by which it was extirpated, and the complete success attending the operation.

The successful termination of the case was unquestionably accomplished by the somewhat unusual method of operating, viz.: by piecemeal. The tumor was removed in about two hundred pieces, the whole nearly filling a three ounce bottle.

Generalizations drawn from the study of a single case do not, as a rule, carry much weight, yet there are several suggestions that may be safely based on this one. The first is, may not a neoplasm, not essentially malignant in its origin, be converted into a malignant growth by attempts at extirpation, which are unnecessarily harsh, and in which too great violence is done to healthy tissues.

In the case above narrated the growth was removed in such a manner that there was the least possible shock to the general system, the least possible violence to the tissue itself, and the healthy tissue beyond the neoplasm was uninjured. Indeed, the healthy tissues were virtually not in the least degree encroached upon. As long as the operation was confined to the removal of small pieces by the snare good progress was made, and there was no appreciable extension of the growth; but, as was soon learned by unfortunate experience, when the galvano-cautery was used, while a small portion of the growth was destroyed, such violent inflammatory reaction was excited by the cautery that the growth extended rapidly. My only excuse for using it was that it was the orthodox thing to do. It was finally abandoned, and not a moment too soon, with the result that my patient was rescued from a most desperate strait.

This brings us to another suggestion. Is not the galvano-cautery a much overestimated instrument, and is not quite as much, if not more, harm than good often done by its use? All caustics are an evil, but oftentimes a necessary evil. While they are used to destroy morbid tissue there is always set up an inflammatory reaction in the tissues beyond of a more or less severe character. This is in every case harmful. Any caustic which causes destruction with the least reaction is the best to use. Any caustic which sets up the most severe reaction is the worst. I think I am perfectly justified in the assertion that the potential-cautery, whose action depends on the use of heat, causes a far greater reaction than a chemical agent. In the one case we have caustic action with the addition of heat, while in the use of a chemical agent heat is not present. If, then, we can accomplish what is desired without subjecting the diseased part to the action of this intense heat, it seems to me to be our duty to accomplish our end in a manner which entails the least danger of mischief.

THE SURGICAL TREATMENT OF LUNG CAVITIES.

By F. W. WUNDERLICH, M. D., Attending Surgeon to St. Peter's Hospital, Brooklyn.

From the proceedings of the *Med. Soc.* of the Co. of Kings, N. Y.—The want of success in treating lung cavities by internal remedies has induced some physicians to try local treatment by surgical means.

W. Koch, E. Fraenkel, Jablonowsky, Hiller, Pepper, and Mosler tried to cure lung cavities by making injections through the thoracic wall into the diseased part of the lung with solutions of carbolic acid, salicylic acid, and iodine.

These trials, made in different parts of the world and by different men, have all been unsuccessful, if applied to tubercular cavities or such as were complicated with tubercular disease. Mosler and others tried to aspirate the contents of lung cavities, and injected medicines afterward, but had no better result.

After these failures Mosler took up the old plan of opening lung cavities. He hoped to obtain better results by evacuating their contents, establishing thorough drainage, and applying antiseptic dressing.

The opening of lung cavities had been first proposed by Baglivi, 1664 and 1696; again by E. Barry, of Dublin, 1726 and 1763, who professed to have cured several consumptive patients; Sharpe, 1766; Ponteau, 1783; and a number of others.

Lung cavities threatening to burst open were incised or punctured by Brechet, 1831; Macleod, 1836; Claessens, 1839; Hastings and Storks, 1844; Herff, 1844; Collins, 1855; Mosler, 1873; and Pepper, 1874.

Cases seems to prove conclusively that lung cavities due to or complicated with tuberculosis can not be cured by incision and drainage.

Other diseases have been treated with more success, especially echinococcus, abscess, and gangrene of the lung. Professor Mosler treated a patient in 1875, who had an echinococcus in the right lung, with injections of carbolic acid solution, and cured him.

Fenger and Hollister, of Chicago, reported a case of echinococcus of the lung, which caused a large abscess in the middle lobe of the right lung, complicated with gangrene, and the treatment was successful.

There can be no doubt that the operation is indicated in many cases of abscess and gangrene of the lung, as there is but little prospect of recovery without it. It may be very difficult to form a correct opinion whether, at a given time, a spontaneous cure by the efforts of nature may be expected or not; but the operation should not be delayed until the vital powers are too reduced to admit for recovery. Cavities in the supra- and infra-clavicular regions, or in that part of the lung covered by the scapula, do not come within the sphere of operative interference. Cavities in the mammary, axillary, and infra-scapular regions can be reached.

An important question is, whether the operation is to be continued or abandoned if no pleuritic adhesions are found. It would be rash to open the pleural cavity and run the risk of causing an acute pyo-pneumothorax, which might result fatally. Fortunately, adhesions are generally found in cases that require surgical treatment. Their presence or absence can be ascertained by pushing an exploring-needle through the intercostal muscles and pleura into the lung. If it does not move synchronously with the respiratory movements, it is certain that adhesions are present.

It is advisable to make several explorative punctures and aspirations before operating, in order to ascertain the exact position of the cavity, its depth, and the character of its contents. If the cavernous signs are confined to a small area the incision has to be made there. If the cavity is large, it is preferable to make two openings.

One at the point of easiest access; it should be large enough to admit a finger, which should be introduced to make a careful exploration of the cavity. It must be ascertained whether any loose pieces of dead tissue are in the cavity, and where the most favorable point is for the second opening, which should be as near as possible to the lowest part of the cavity. If only one opening is made, a double drainage-tube should be used, as it facilitates the washing out of the cavity. The incision through the integument and intercostal muscles should be about two inches long, to give ample room. After division of the integument and muscles, the knife should be used no longer; the pleura and lung tissue should be perforated with a blunt instrument.

Hueter and Fenger used a dressing forceps for the purpose. After reaching the cavity, they enlarged the opening by separating the blades of the

forceps. The thermo-cautery is to be preferred for this part of the operation; its employment diminishes the danger of hæmorrhage.

The cavity has to be washed out, especially if fætor is present. Lyell used Condy's fluid. Most of the other operators used solutions of carbolic acid. Carbolic acid is so prone to cause poisoning, if used in this manner, that it is preferable to use salicylic-acid solutions; or, if more energetic action is needed, chloride-of-zinc solutions. Thymol seems to be too irritating to the bronchial mucous membrane. In one of Professors Mosler's cases a sudden change for the worse occurred after an irrigation with a thymol and boric-acid solution.

The dressing should absorb the discharge readily, and must be changed as frequently as the amount of discharge necessitates. If possible, the dressing should be arranged in such a manner as to require but one change in twenty-four hours, because frequent changes disturb the patient too much.

Professor Mosler made out a list of nineteen operations on lung cavities performed and reported since 1873. As the list has not been published in English, I translate it, and add it here:

*Nature of the Cavities.*—Abscess of the lung, 5; gangrene of the lung, 5; tubercular cavities, 2; bronchiectasis, 5; echinococcus of the lung, 2.

*Manner of Operation.*—Once repeated punctures. Twice paracentesis with trocar and drainage. Eleven times incision and drainage. Five times thermo-cautery and drainage. Thirteen patients died a shorter or longer time after the operation. Two patients were considerably improved. Three patients were permanently cured (two of echinococcus and one of gangrene with empyema). In one case the result is not known.

### PENETRATING PISTOL-SHOT WOUND OF THE CHEST.

By CHARLES A. POWERS, M. D., Late House Surgeon to the Chambers Street Hospital, New York.

From the *N. Y. Med. Jour.*, Jan. 10, 1885.—The mortality in this injury is stated by various authors as being from 80 per cent. to 95 per cent., the dangers being primarily hæmorrhage, and secondarily inflammation of the chest contents. In view of this, the accompanying cases present interest, they being the only cases of penetrating shot-wound of the chest admitted during a period of four months to a hospital which affords an extensive emergency service.

In each of the cases a bullet of large size entered the lung, in the second case passing entirely through it; in neither was the injury accompanied by marked hæmorrhage or followed by acute inflammation, and in each the patient made a speedy and perfect recovery.

At this hospital the local treatment of pistol-shot wounds is essentially the same in all cases; but slight attempts at probing are made; no endeavors are made to hermetically seal the aperture; a light, but thoroughly antiseptic, dressing is applied, which, in many instances, is left on until the wound is entirely closed.

CASE I.—C. Z., aged thirty-eight, single, native of Germany, a silver-smith, was brought to the Hospital in an ambulance. He had been shot in the left chest about twenty minutes previously with a "bulldog" revolver of 44 calibre, fired from about fifteen feet distant.

On admission, the patient was conscious, surface cool and moist, muscles relaxed, face pale and anxious, temperature 97.5°, pulse 140 and feeble, respiration 36 and shallow. He was unable to draw a deep breath without great pain, which was indefinitely referred to the region of the left chest.

Examination revealed a punctate wound, four centimetres below the middle of the left clavicle, which admitted the end of the little finger; its edges were fairly regular, somewhat blackened, and there was but little hæmorrhage from it. The surrounding tissues for a space of six centimetres were emphysematous. A probe, gently introduced, passed easily backward, inward, and somewhat downward about seven centimetres, and, being arrested, was withdrawn, and no further attempts were made with it. Careful palpation failed to locate the ball, though firm pressure over the inner

border of the left scapula caused great pain. Physical examination of the chest gave a negative result.

The wound was dressed with iodoform gauze, peat, and borated cotton; the arm confined to the side; a light diet and perfect rest ordered. Three hours after admission he had a violent fit of coughing, and expectorated a considerable amount of blood; neither hæmoptysis nor cough, however, recurred.

During the first three days the temperature was normal in the morning, and at 100° F. in the evening; but after the third day it was normal throughout. For the first ten days the pulse was 80, then it fell to 70, and continued at that rate. The respirations were 28 a minute for eighteen days, after which they were normal.

The patient made no complaint of pain after the first day. Physical examination of the chest, frequently made, gave no signs of change, and the dressing was undisturbed till the thirteenth day, when it was removed, and a granulating ulcer of about the size of a pea found at site of wound. This ulcer gradually closed.

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## CIRCULATORY ORGANS.

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### THE INTRA-VASCULAR INJECTION OF BLOOD AND OTHER FLUIDS.

By JOSEPH C. HUTCHISON, M.D., LL.D., of Brooklyn, N. Y.

From the *N. Y. Med. Jour.*, Dec., 13, 1884.—Notwithstanding the operation of transfusion of blood has been practiced for more than five hundred years, and many brilliant illustrations of its value in saving human life have been noted, it must be reluctantly admitted that it has not fulfilled its early promise, and is now resorted to much less frequently than formerly.

The writer has for a long time believed that transfusion would be more frequently practiced, and take a higher rank as a therapeutic expedient, if the means for performing the operation were simplified, its dangers diminished, and a proper and easily obtainable fluid could be found for the purpose. The object of this paper is to consider these requirements.

*Description of the Apparatus.*—The apparatus which I have devised consists of a cylindrical glass receiver, graduated into inches, with a capacity of twelve ounces. A metal cap, containing a perforated female screw, is attached to its lower end, having a perforated nipple-shaped termination, to which a rubber tube four feet long is connected, in order to convey the liquid from the receiver to the canula which enters the blood-vessel.

The receiver is surrounded by a *double jacket of Indiarubber*, the walls of which are separated by a half inch space for holding hot water, and is arranged to admit a thermometer.

The apparatus is warmed by filling it with hot water, which is allowed to run off before it is filled with the fluid which is to be injected. The receiver is then closed with the rubber stopper carrying the thermometer, and the apparatus is suspended or held, by an assistant, three or four feet above the vein which is to be opened.

The rapidity with which the fluid is introduced can be regulated by the stop-cock in the canula. After the canula is introduced it is fixed in position by the finger laid over the opening in the vein; no ligature is necessary to retain it in position.

A vein at the bend of the arm is usually selected for the operation, a saphena near the outer ankle may be selected, or the fluid may be introduced into the radial artery, as recommended by Hunter, and recently practiced by Halsted. The central end of the artery should be selected.

A number of appliances have been devised for the purpose of simplifying the operation of transfusion, and for preventing the entrance of air into the blood-vessels; these results can be best obtained by a simple apparatus, con-



structed on the principle of the one I have exhibited. If the operation is managed with ordinary care it is impossible for air to enter the vein. The special advantage which this apparatus has is the hot-water jacket. It is important that the injection should not enter the blood 98·5° F., and there is no objection to temperature of 105° F. The temperature can be accurately regulated by the thermometer.

*Transfusion of Blood.*—It was believed until recently that the reviving power of blood resided in the corpuscles, that transfusion, when performed with the serum alone, or with any other fluid, would prove fruitless. Recently, however, Ott and other observers have demonstrated, that the blood corpuscles is not the important element; that the indication is to restore activity to the circulation by restoring the bulk of the vital fluid so as to enable the organs, especially the heart and brain, to perform their functions duly; that, for these and other reasons, blood is not so good as saline solutions for transfusion in acute anæmia.

*Saline Injections into the Veins.*—The intra-venous injection of saline solutions was extensively practiced during the cholera epidemic of 1832–33. More recently this matter has received considerable attention, especially by the Germans; and they have proved, by numerous experiments on animals bled to syncope, that life can be restored by injecting saline solutions into their veins, and that they are even to be preferred to blood for that purpose.

Dr. Hutchison then refers at some length to experiments performed by Ott, Schwarz, Jennings, Mikulicz, and a paper by Bull.

There are many nice points connected with the operation which can only be settled by experiment, such as the best method of introducing the liquid, the proper composition, temperature, specific gravity, quantity, and the rapidity with which it should be introduced. In two cases I injected a fluid composed of common salt, 3 iij, and alcohol, 3 j, in one pint of water, of which two pints were introduced into the median basilic vein, at a temperature varying from 100° to 110° F., and repeated the operation when the algid symptoms reappeared. The following solution, recommended by Dr. Gull in the "Reports on Epidemic Cholera to the Royal College of Physicians," London, 1854, was used in three cases:

Chloride of sodium, 60 parts by weight; chloride of potassium, 6 parts by weight; phosphate of sodium, 3 parts by weight; carbonate of sodium, 2·13 parts by weight.

"By dissolving one hundred and forty grains of this salt in forty ounces of distilled water, and filtering, we obtain a fluid having a decidedly saline taste, a faintly acid reaction, and nearly approximative in its composition to the fluid effused, minus the organic substances. These are small in amount, and their loss has apparently no important influence on the constitution of the blood."

In Dr. Gull's formula the sulphate of sodium is strangely omitted. A more accurate formula (the one which I recommend), deduced from Schmidt's analysis, is the following:

Chloride of sodium 60 grains; chloride of potassium, 6 grains; phosphate of sodium, 3 grains; sulphate of sodium, 1·5 grains; carbonate of sodium, 20 grains.

Dissolve one powder in 24 ounces of water at 100·5° F. The fluid should enter the vein at a rate not exceeding one ounce per minute, and this can be accurately regulated by means of the stop-cock in the cannula. The quantity of fluid to be injected, if a saline solution is used, is from 12 to 24 ounces. The injection may be stopped when the pulse becomes stronger and the temperature of the peripheral parts of the body more normal.

The matter presented in the preceding pages seems to the writer to justify the following conclusions:

1. It appears to be proved, by experiments upon animals and by clinical facts, that corpuscles of transfused blood are short-lived and rapidly excreted; that the reviving power of blood does not reside in the red corpuscles, and hence the danger of excessive loss of blood is not due to the diminution of its corpuscles and other solid constituents.

2. The important element in transfusion is the restoration of the vital fluid to the vascular system, increasing vascular tension, and causing energetic contractions of the heart.

3. The intra-venous injection of salt solutions in appropriate cases is a more simple and safer operation than transfusion of blood. It can be done without the aid of a skilled assistant, and the materials for injection are easily obtained.

4. If further experience should confirm the favorable results from intra-venous injections that have been recently reported at home and abroad, the operation deserves to be held in the highest esteem, and is destined to occupy an important position among therapeutic agents.

### SIMULTANEOUS INCOMPLETE WOUND OF THE FEMORAL ARTERY AND VEIN.

By L. S. PILCHER, M.D., of Brooklyn, N. Y.

In the proceedings of the *N. Y. Surg. Soc.*, published Nov. 29, 1884, we find the report of a case in which Dr. Pilcher ligated both vessels in the wound and recovery followed the operation. The patient was presented and was a butcher, thirty-four years of age, who accidentally stabbed himself with a narrow-bladed knife, the blade entering the upper and front part of the right thigh, a little below the line of Poupart's ligament. The overwhelming hæmorrhage which at once followed was fortunately quickly controlled by pressure at the hands of Dr. N. B. Sizer, of Brooklyn, who happened to be within hail at the moment of the accident. This pressure was then assisted by the insertion of a tampon into the wound until the arrival of Dr. Pilcher. The original wound was a transverse cut of only three-fourths of an inch in extent. A longitudinal incision of some inches in length was made, extending above and below the stab cut, while pressure was kept up at the point from which hæmorrhage proceeded. The femoral vessels in Scarpa's space having been fully exposed, it became evident that the knife had pierced the femoral vein about an inch and a half below Poupart's ligament and, having divided its outer half, had also divided the adjacent inner half of the femoral artery, inflicting thus an incomplete wound upon both the main vascular trunks of the limb. While pressure was still directed upon the vein wound, the artery, being compressed above, was completely divided at the point of wound, and each of the divided ends secured by a catgut ligature. More difficulty was experienced in dealing with the vein, for, although adequate pressure was made upon it both above and below the wound, the moment the pressure upon the wound itself was interrupted, a most copious flow of blood would deluge the field of operation. Further dissection, however, finally revealed two large muscular vein-trunks entering the femoral vein from behind, just opposite the point of the wound. A ligature having been tied about each of these, the further dealing with the main trunk, by severing it and tying each end separately, was accomplished without difficulty. The wound was then irrigated with solution of bichloride of mercury, 1 to 1,000, and closed with sutures, proper bandaging and compresses being applied to insure union by first intention. Suppuration however, took place, and on the third day the wound was reopened at its most dependent point, drainage-tubes were inserted, and irrigation was resorted to. A sharp attack of cellulitis along the line of the sartorius muscle followed, making several counter-openings for drainage necessary for its control.

The patient rallied well from the extreme loss of blood sustained at the time of the accident. After the eighth day his progressive convalescence was assured. His perfect recovery was delayed by the fact that some of the catgut ligatures proved to be irritants, and determined circumscribed phlegmons at the points where they had been applied. These all finally closed, and on the 2d of July the patient began to attend to his business again. Later in July another small phlegmon formed at the site of the lower ligatures, which, however, occasioned only a temporary inconvenience. At no time in the history of the case did any noticeable disturbance in the nutri-

tion of the limb occur. In the early days, after he began to walk about, there was marked oedema with weakness of the leg; an elastic stocking sufficed to control this.

### ANEURYSM OF THE RIGHT SUBCLAVIAN ARTERY.

By A. G. GERSTER, M.D., Prof. of Surg. in the N. Y. Polyclinic.

In the proceedings of the *N. Y. Surg. Soc.*, published Dec. 13, 1884, is a case reported by Dr. Gerster, that of a male patient, 51 years of age, without history of syphilis, who had complained of acute pain along his right arm since the summer of 1883. A pulsating tumor was detected behind and to the right of the sterno-clavicular articulation on the right side toward the close of the same year, and the diagnosis of aneurysm of the right subclavian artery was made by Dr. John Schmidt. The characteristic bruit was present, the carotid and radial pulses were normal and synchronous with the heart's action.

The main swelling and resistance being probably situated in the angle of the clavicle and the sterno-mastoid muscle, direct pressure on the tumor was not tolerated on account of the intense pain, but reduced the swelling and pulsation to a great extent.

On January 16, 1884, he deligated the common carotid and the subclavian, or, according to English nomenclature, the axillary artery, the latter being tied in Hohenheim's triangle, below the clavicle. The ligatures used were juniper catgut. The incisions were sewed up—not drained. Immediately after the ligatures were applied, the radial pulse and that of the carotid disappeared; but the pulsation of the tumor became more violent than before, when the ligature on the carotid was tightened. Nothing abnormal was observed regarding the pupils, the heart's action or respiration.

For a considerable period of time no appreciable difference in the conformity of the pulsating swelling was observed; on the contrary, the shooting pains and formication along the branches of the brachial plexus seemed to increase. The wounds healed correctly under a single dressing. About four weeks after the operation it first became apparent that the tumor had decreased in size. Simultaneously the pains became more tolerable. In March and April thirty hypodermic injections of Bonjean's ergotine were made in the abdominal region, and seemed to hasten the shrinking of the tumor, which was on presentation of the patient quite small, but pulsation had returned somewhat within the last three months.

### ALIMENTARY ORGANS.

#### STRANGULATED HERNIA.

By GEO. F. SHREADY, M.D., Surgeon to the Presbyterian and St. Francis Hospitals.

In the *Medical Record* are reported nine consecutive cases with operation and recovery. The author of the paper says:—My experience with strangulated hernia has taught me that taxis is very much overdone. Hardly a case comes to us which is not the worse for it. The temptation to use more or less force is too great for most men to resist. I would say to the practitioner, who is not prepared to operate for strangulated hernia, that a safe rule is not to persist in taxis after the first judiciously gentle efforts at reduction. If he goes beyond this he rarely appreciates how much force he is apt to employ before he is willing to give up the fight to another. The patient generally has the best chance with no taxis at all until he is etherized for a possible herniotomy. No time is thus lost, and the operation can be performed as soon as it is decided that taxis availeth not.

Every one knows the rule to operate at once on an irreducible strangulated hernia. This goes without the saying. I am convinced, however, that there are many who do not appreciate its full force, even when cases are recog-

nized early. There seems to be a temptation to hope against hope that an operation may be avoided. And yet the operation in itself is not dangerous. Even in case of doubt in diagnosis, and there are not a few of such to which this mark will apply, it is safer to herniotomize the patient than to let him alone, trusting to chances.

It is, of course, not always easy to decide whether or no strangulation actually exists. The rule should be always be to give the benefit of the doubt to the operation, and act promptly. The main tests for strangulation are pain, tenderness, and continuous vomiting, with a recently irreducible hernial tumor. Men in hospital practice, who see a great deal of hernia, always examine the groin when persistent vomiting exists. The candidate at hospital examination who would neglect to mention vomiting as a symptom of strangulated hernia would get a black mark.

To say that herniotomy is a comparatively easy operation might surprise one who has never tried it, and who has timidly folded his knowledge in the seven anatomical layers. Certain drawbacks are naturally to be expected, and should be overcome on general principles. Living anatomy has a way sometimes of dodging the perceptions of the most expert operator. In herniotomy it is the rule. The layers are always ready to compromise their individuality under a becomingly cautious use of the director. The main thing to be sure of is when the sac is reached no matter whether the operator divides six or six times six layers before he gets to it. And sometimes in very old hernias he can take his choice.

The making of clean, free cuts, and always in the same line, invariably give the best results. As a rule I prefer to open the sac, as I believe it does not add to the gravity of the operation, while it insures safety in other directions. I have not seen a case in which I was willing to do otherwise, and I do not believe I have lost one in consequence.

Too much stress can not be laid upon the necessity of having the strangulated portion of the gut in the best possible condition before returning it into the abdomen. Time is well spent in such endeavors. Nothing will accomplish the end in view more efficiently than the direct application of towels wrung out in a hot antiseptic solution. I have kept a suspicious knuckle of gut covered by turns in this way for nearly an hour, with the result of a perfect restoration of the circulation.

In the treatment of this, as well as any other operation wound, the indications for cleanliness, drainage, and rest are carefully followed, nothing more. I have never believed that the antiseptic spray was necessary for a good result in any operation. You gain every bit as much, and with half the trouble, by thoroughly irrigating the wound with an antiseptic solution after the operation is completed.

I do not think it is a calamity for a herniotomy wound not to heal by first intention, as by granulation and subsequent cicatrization the hernial opening and sac are more likely to become occluded. The aim is, of course, for first intention. While closing the wound, and after inserting a decalcified drainage-tube, it is well to take several deep stitches through the entire substance of the sac at different points, with the chance of exciting adhesive inflammation, and thus obliterating the sac cavity. I succeeded by this method in four cases. After closing the wound, firm pressure is maintained upon a warm, thick, moistened pad of sublimated gauze by means of an ordinary spica bandage. The dressings are not disturbed as long as the temperature is normal, or until the wound is healed.

Partly as a precautionary measure against traumatic peritonitis, but principally for the purpose of absolute rest, my patients are kept under the influence of morphine during the first four or five days after the operation. The bowels generally take care of themselves, and require no help unless evidences of intestinal irritation manifest themselves.

#### HERNIA.

Dr. John B. Roberts, in a paper read before the *Philadelphia Clinical Society*, emphasizes the following points:—(1) That inguinal and femoral

hernia will be found at the same time on the same side much oftener than is supposed. (2) That it is safer to operate in cases of suspected strangulation than to postpone operation beyond twelve hours. (3) That herniotomy is attended with little hemorrhage, and if done antiseptically, is accompanied by rapid union and little risk to life.

#### TREATMENT OF CANCER OF THE RECTUM.

In a clinical lecture at the Necker Hospital, Professor Trélat drew the following conclusions with regard to the treatment of cancer in the rectum: (1) Cancers of the rectum should not be touched, unless they cause grave disorders. This rule should be positive, with the single exception that very small cancerous deposits may be removed from the lower part of the rectum and the margin of the anus. (2) In all other cases the treatment should be confined to complications and palliative operations. In giving these rules I am in accord with Professor Verneuil. (3) As palliative operations, rectotomy may be done when the finger can be passed beyond the upper limit of the neoplasm. If the neoplasm is more extensive, the surgeon should abandon rectotomy, and work out a way of derivation; for by performing rectotomy in these cases, the surgeon is almost certain to injure the peritoneum. With the English surgeons, and Labbé and Tillaux, I am in favor of lumbar colotomy, because it is a simple operation, less dangerous, and affords a ready means of exit for the feces. Other surgeons prefer to make an igniual anus; but there is risk of opening the small intestine, with all the attendant dangers and inconveniences.—*Revue de Thérap.*—*Buffalo Med. and Surg.*, Jan. 1885.

#### THE TREATMENT OF INTUSSUSCEPTION.

By FREDERICK TREVEA, F.R.C.S., Surg. to, and Lect. on Anatomy at the London Hospital.

From the *Weekly Review*, Jan. 24, 1885.—The treatment of intussusception should be prompt and active, and no reliance is to be placed upon expectant measures. In dealing with the detailed treatment of intussusception, it will be most convenient to limit the matter to the treatment of the acute and subacute forms.

I think that, as the very first element in the treatment, opium should be given. It has been shown that intussusception depends upon disordered peristaltic movements in a limited segment of the bowel. Opium stills all peristaltic movements, and places the bowel in a condition of physiological rest. When a patient is under the influence of the drug the intussusception cannot well increase in size, although the process of strangulation may still progress. The drug however, must be given with caution, and its effects closely watched. It must not be forgotten that opium may mask the principal symptoms, and may bring about so great a relief that the surgeon may be misled into believing that a permanent cure has followed.

With regard to the question of feeding, no nourishment should be given by the mouth in acute cases. At the most, the patient may have a little ice to suck. In acute cases the question of feeding does not really arise.

The next element in the treatment consists in attempting to reduce the invagination by enemata. In acute cases this measure should be adopted as soon as the patient is under the influence of opium. In a really acute case no benefit can be expected to attend the use of enemata after—as an extreme period—the second day. Forcible enemata, given at a later stage, in acute cases, have led to rupture of the bowel; and even when such an accident has not occurred, they have appeared to do little but harm. In subacute cases successful reduction by injection has followed at almost any period of the disease, even after ten, fourteen or twenty days have elapsed. With every day that passes, however, the chances of such reduction very rapidly diminish. Pure cold water should be used at a temperature of 99° F.

No rules can be given to determine the amount of force to be employed. The more recent the case, the more considerable may it be. In subacute

cases, the degree of pressure employed should be at least moderate. In any case, the injection should be retained for at least fifteen minutes.

Enemata of carbonic acid in these cases are, I think, to be decidedly condemned.

Failing reduction by these means, I would urge that, in acute and subacute cases, laparotomy should be performed without delay. It is the delay, and not the operation, that is so serious in these cases. Laparotomy is regarded as a last resort in these cases, whereas it should be looked upon as almost the first resort. There is no middle course open. Of certain other modes of treatment, their employment is in opposition to the chief teachings to be derived from a study of the pathology of the disease. It is true that the present mortality after laparotomy in intussusception is very high; but it can be shown distinctly that this is due to the delay in the operation, to the custom of regarding it as a last and desperate resource.

The procedure, when undertaken, should be carried out with strict antiseptic precautions. In all but exceptional cases, the incision is most conveniently made in the middle line below the umbilicus. The whole area of the abdomen can be well explored through such an incision, and any form of invagination dealt with.

The intussuscepted mass should be, as far as possible, exposed in the wound, and attempts at reduction made in cases where the state of the gut would encourage such attempts. Reduction of the invagination is best effected by dragging upon the entering bowel with one hand, while the intestine about the lower end of the intussusception is gently squeezed with the other. If the bowel be found to be in a viable condition after reduction, the coil may be replaced in the abdomen, and the parietal wound closed. I am strongly of opinion that a drain should be introduced into the abdominal cavity when any evidences of more than limited peritoneal inflammation exist. The principal feature of the after treatment should be the maintaining of perfect rest in the bowel—an end effected by the administration of opium, and by feeding the patient, as far as possible, by the rectum only.

The general mortality of laparotomy in intussusception is 72.7 per cent., as estimated from 83 recorded cases. In the instances, however, where the reduction was easy, the death-rate was only 30 per cent.; while, in the cases where it was difficult or impossible, the mortality was 91.3 per cent.

#### CHOLECYSTOTOMY AND CHOLECYSTECTOMY.

From an editorial in the *Med. News*, Dec. 20, 1884.—1. *Cholecystotomy* was first practised by Dr. J. B. Bobbs, of Indianapolis, on June 15, 1867. Fifty small calculi were removed from the bladder, the incision in it was closed by one point of suture, and the woman recovered. The operation has been practised at least twenty-seven times: by Tait in 18 cases, by Keen in 2 cases, and by Bobbs, Sims, Ransohoff, Von Winiwarter, Gardner, Eddowes, Savage, Courvoisier, Trendelenburg, König, Boeckel, and a surgeon referred to by Tait, each in one case. Of the twenty-seven, twenty-one recovered and six died, the fatal result in three having been due to collapse and hemorrhage, in two to collapse alone, and in one to a probable escape of bile into the peritoneal cavity. In twenty of the operations the edges of the opening in the gall-bladder were at once stitched to that in the abdominal wall, thereby forming a temporary fistule. In the case of Sims, a portion of the viscus was extirpated previous to sewing it to the superficial wound. In the case of König, the belly was opened, the bladder detached from the abdominal wall by sutures, and not incised until the tenth day. In Kocher's case, adhesions were excited by placing a bit of Lister's gauze in the wound, and the gall-bladder was incised on the seventh day. In three of the remaining exceptional examples the incision was closed by sutures and the organ returned into the abdomen. The case of Bobb's in which one stitch was used, recovered, as did that of Courvoisier after the continuous suture, while the patient of the surgeon referred to by Tait died from the escape of the bile into the peritoneal cavity after the use of the continuous suture. In the seventh

exceptional case, Von Winiwarter established a fistule between the gall-bladder and the small intestine. This was effected by uniting them with stitches, suturing the intestine to the abdominal wound, opening the gut on the fifth day, puncturing the opposed surfaces through the incised intestine, and, finally, closing the latter with sutures. Hence, this operation was not an ordinary cholecystotomy, but a cholecyst-enterostomy.

Several different methods of operating have been adopted. With the view to prevent the escape of bile or mucus into the peritoneal cavity, Kocher excited adhesions between the viscus and abdominal wall before opening the former, by inserting a bit of gauze in the wound, and König stitched the bladder to the belly, the procedure being similar to Howse's operation for gastrostomy. The former method should be rejected, while the latter is scarcely indicated, as peritonitis was not induced in a single one of the twenty cases in which the bladder was accurately sutured to the wound in the abdominal wall before it was opened. In three cases the incision in the gall-bladder was closed with sutures, and the organ returned into the belly. Two recovered, and one died from the escape of bile into the peritoneal cavity. Tait declares that this procedure is dangerous in consequence of the periodical filling and emptying of the bladder, and because if a stone be left in the cystic or common duct, the wound is liable to reopen. The only objection to the ordinary procedure is the formation of a permanent fistule, which happened in at least three instances; but as this is merely a source of inconvenience, we agree with Tait and Keen in rejecting suture of the gall-bladder.

2. *Cholecystectomy* is said by Tait to have been performed six times, with three deaths, but it is quite certain that all of the operations were not total. Excluding the case of Sims, in which during the operation of cholecystotomy a portion of the bladder was cut off before attaching it to the abdominal incision, and the case of partial extirpation of S. W. Gross, which was merely incident to nephrectomy for carcinoma, we find only four recorded cases, three from the practice of Langenbuch and one from that of Courvoisier. All recovered, so that with this limited experience, the procedure has to be pronounced free from danger. The operation is performed by first dissecting the bladder from its connections with the liver and then tying the cystic duct. Should the common duct be patulous, the operation may be performed, but if it be obstructed by an unremoved or undiscovered stone, the procedure is not justifiable. Under any circumstances, we are disposed to think with Tait and Keen that, in view of the comparative safety of cholecystotomy, extirpation of the gall-bladder exposes the patient to a needless additional risk, and that it should, therefore, be abandoned.

### GUNSHOT WOUND OF THE INTESTINES TREATED SUCCESSFULLY BY LAPAROTOMY WITH SUTURE OF THE INTESTINES.

By WILLIAM T. BULL, M.D., Surg. to the New York Hosp.

From the proceedings of the *N. Y. Surg. Soc.*, Jan. 27, 1885.—The propriety of exploring the abdomen for gunshot wounds has been amply discussed by many surgeons, both here and abroad. The majority still oppose it, notwithstanding that the very favorable results of abdominal operations for pathological lesions are generally acknowledged. Otis, Sims, Gross, Dugas, McGuire, Kinloch and Parkes, in this country; Legouest, in France, and Nussbaum, in Germany, have urgently advocated operative interference. But they have been compelled to frame their conclusions from theoretical considerations and statistical data, and have been unable to support their views by the record of a single successful case. In fact, up to the last twelve months I find but two cases recorded in which thorough abdominal exploration was resorted to by laparotomy. Kinloch, in 1882, opened the belly and sutured five pistol-shot wounds in the mesentery and intestine. Two other

wounds escaped observation. The patient died in thirty hours. Lloyd, of the Queen's Hospital, Birmingham, performed abdominal section for suppurative peritonitis three days after a pistol-ball had perforated the small intestine in two places. The intestine was sewed into the abdominal wound and the cavity drained. Death followed in two hours. Last summer, however, Kocher, of Berne, sutured a pistol-shot wound of the anterior wall of the stomach through an incision in the median line, and the patient recovered.

As a further contribution to this subject I wish to present the following history, and with it I have the pleasure of showing you the patient. It is now three months, lacking a few days, from the time the operation was performed, and he has quite recovered his usual health. William McElroy, a truck-driver, twenty-two years of age, was accidentally shot with a pistol of calibre .52, the ball entering the abdominal wall near the navel. Half an hour afterward he was perfectly conscious, warm, with a pulse of 96, of good volume; temperature 97.8° F., respiration 18. He had vomited solid food. He retched frequently, complained of great pain all over the abdomen, and had tenesmus. The abdomen was tender, but not swollen nor tympanitic. The bullet could not be detected anywhere beneath the skin. The wound was not probed. A dressing of iodoform gauze and borated cotton was applied after thoroughly washing the skin with a two-and-a-half-per-cent. solution of carbolic acid. One sixth of a grain of morphine was given hypodermically.

Twelve hours later, his condition was as follows: pulse 102, respiration 30, temperature 100.2° F. He had severe abdominal pain, although he had received twenty-one minims of Magendie's solution (in four injections) since admission. He had slept for about half an hour after each injection. He had vomited a little watery fluid, with particles of food. His urine had been drawn, and contained no blood. Nothing had been passed *per rectum*. The abdomen was normal in appearance (save for the wound) and to touch, but slightly tender all over. The rectum was normal. He had received nothing by the mouth but ice, except (by mistake) a cup of milk, which was shortly afterward thrown up. A cold-water coil had been put on the body and the dressing made lighter. A probe could not be made to enter the cavity with gentle manipulation.

Seven hours later, seventeen hours after the accident his condition was practically unchanged. He had passed urine voluntarily. Laparotomy was then performed under full antiseptic precautions, and seven wounds found which were closed with sutures. On opening the peritoneum, bloody serum, without any fecal masses, but containing small clots, flowed out freely (at least two pints), floating the coils of intestine into the wound. The mucous membrane was inverted by making traction with two hooks, so as to convert the round hole into a longitudinal slit, parallel with the transverse diameter of the gut. The peritoneal edges were then approximated by five sutures inserted according to Lembert's method. Iodoform was rubbed along the line of suture. (This plan was followed with all the other wounds.) The bullet was detected lodged in the upper surface of the sigmoid flexure, close to its mesenteric border. It was just beneath the peritoneum, but, on removing it, the wound was found to enter the lumen of the bowel, which was quite empty. Three sutures closed the wound. (Then is given a detailed clinical history up to the day of convalescence.)

To discuss further details, such as the indications for operation, the technique, the antiseptics, and the management of all varieties of visceral wounds, would be beyond my present purpose. But I desire now to call attention to the fact that operative interference for gunshot wounds of the abdomen has been put to a practical test, and that it has been successful. And I hope that other members of this society may share my conviction, that this plan of active treatment is now justified by these two successful cases, and that it should be adopted (within proper limits) to the exclusion of the "let-alone" policy.

Dr. H. B. Sands said that the most important question relating to practice was, how should the doubtful cases be excluded? The evidence of penetration of the intestine was in most cases uncertain. In very few instances, so far as his experience and knowledge went, even where the intestine was per-



forated, was there a demonstration of the fact by an escape of feces or intestinal fluid from the opening in the abdominal wall. On the other hand, there were some cases in which there was every reason to suspect that a bullet had perforated the hollow viscera within the abdominal cavity, but in which some doubt was afterward felt on this point in consequence of the prompt recovery of the patient. If, in doubtful cases, this point could be settled, it might be the duty of the surgeon, in the light of the success obtained by Dr. Bull, and in view of the almost uniform mortality of such injuries, to open the abdomen, a procedure which might afford the only means of saving life.

Dr. T. M. Markoe remembered a patient who had been brought to the New York Hospital some years ago, a sea-captain who had received a pistol-shot wound while attempting to suppress a mutiny. He was standing upon the rail of his ship, and the mutineer was below him, so that probably the bullet entered the abdomen from below upward. It entered upon the left side, midway between the umbilicus and the superior spinous process of the ilium. The patient was brought to the hospital after considerable delay. There was no evidence of fecal extravasation or hemorrhage, and the shock was moderate. The patient was in exceedingly good condition. Peritonitis and death, however, were expected, but the case progressed from day to day without the development of peritonitis, and the patient recovered without a single bad symptom. To be sure, it might be said, and it had been said at the time, that it was a case in which the ball had evaded the hollow organs, and had slipped off somewhere to one side and become encysted; and who could settle the question whether or not internal organs were wounded? He simply mentioned the case because it was only fair to have both sides of the question presented.

The President, Dr. Weir, remarked that the gunshot wounds which presented themselves in our civil hospitals were made at short range, and that experiments conducted on many cadavers in the late war showed that in nearly every instance such wounds involved the solid or hollow viscera. While opposing the usual principle and advocating a bolder treatment of penetrating gunshot wounds, he thought that Dr. Bull had laid too slight stress upon the danger of exploratory incision.

Dr. F. Lange remarked that, interesting and instructive as Dr. Bull's case was, it admitted the question whether, in this individual instance, the patient's life could not have been saved without operation. At the time of the operation the patient was in a fairly good condition, there was no evidence of peritonitis, and his general condition was such, seventeen hours after the injury, as to render it exceedingly probable that no extravasation of the contents of the gut had taken place. He would like to ask Dr. Bull if taking into consideration the condition of the parts injured found at the operation, the closure of the small wounds by opposition of the gut and fibrinous deposits, and the nature of the exudation, he would regard the recovery of this patient as improbable without operative interference. Second, he would like to ask if Dr. Bull thought it possible that, a number of injuries of the intestine being present, there might have been some probability that manipulations of the gut could have reopened some of the bullet-holes, and allowed infection of the peritonæum to take place in consequence of the operation itself. His remarks did not in the least diminish the value of the operation so far as it was an exploratory operation, but the question was, What had the operation afforded? What did it do? It cleaned the peritoneal cavity, it was true.

Dr. Bull replied that it was impossible to say whether or not the wounds would have remained closed. Where so many wounds had been made in the intestine, even if no fecal contents escaped at the time of making them, a sufficient amount of irritation would be produced to give rise to peritonitis, and there was, moreover, the liability of foreign matter being introduced by the bullet, which would produce damage entirely independent of the wound of the gut itself. He would say that in a patient with seven wounds in the intestines there were next to no chances of recovery by any conservative plan of treatment.

### PENETRATING GUNSHOT WOUNDS OF THE ABDOMEN.— RECOVERY WITHOUT OPERATION.

By EDMUND ANDREWS, M.D., LL.D., Prof. of Clin. Surg. Chicago Med. Coll., Ill.

From the *Weekly Med. Review*, Nov. 22, 1884.—The enthusiasm of some surgeons in the department of abdominal surgery leads them sometimes to be too sweeping in their assertions. For instance, in urging the importance of exploratory incisions to discover and treat visceral wounds, some have gone so far as to state in substance that the patient has no other hope of life. Now, I believe in the importance of these exploratory incisions, in proper cases, but the settlement of the question as to what the proper cases are requires us to look candidly at all the facts. The first thing which impresses me, and probably every one who has been in military service, is that the small bore pistols make visceral wounds of much less danger than the savage projectiles of the army rifles.

I purposely omit many penetrating pistol wounds which recovered because the fact of recovery prevented positive proof of visceral wounds, since there could be no post-mortem examination.

I incline to think that a small shot wound in the stomach, is less prone to cause leakage into the peritoneal cavity than one in the thin walls of the colon or ileum. It is obvious, of course, that small bullets will be less dangerous than large ones.

Even the great musket balls are not uniformly fatal. The Surgeon General, (P. 202, Part 2, Surg. Vol. Hist. War), gives 3,611 cases of penetrating shot wounds with ascertained injuries of the abdominal viscera. Of these 423 recovered. Collations from the various European wars give 1,146 penetrating shot wounds of the abdomen—not distinguishing whether the viscera were known to be wounded. Of these 285, or 25 per cent. recovered. My opinion is that a very much larger per cent. of pistol wounds will recover, especially if the stomach be the viscus penetrated. Surgeon Otis is of the opinion that in military practise where the stomach and intestines are perforated the abdomen should be opened. In civil practice, the question is much more difficult, because the danger of the operation is not as slight as some enthusiasts state and the hope of recovery without it is considerable. Unfortunately we are unable to determine beforehand the exact nature of the injury, otherwise we could settle the question with ease, but must proceed on such probabilities as we can obtain. The conclusions based on the experiments of certain European surgeons and of Dr. C. T. Parkes in this country in, shooting through the abdomens of animals, may not be applicable in full extent to human beings, but at any rate they illustrate principles. I think we may conclude for the present as follows: (1.) Penetrating wounds of the abdomen made by musket shots have a mortality of at least four-fifths of the patients, when not operated on. In military practice a large part of these cases should be treated by abdominal section. (2.) In abdominal wounds from smaller projectiles, the risk is less, but if the bullet seems from its direction to have traversed the intestines, the treatment should be the same. (3.) If no intestinal wound should be discovered, the operation may nevertheless be of the greatest benefit to the patient, if done promptly, by enabling the surgeon to ligate bleeding vessels, as shown by Dr. Parkes in his experiments.

### URINARY AND GENERATIVE ORGANS.

#### TENOTOMY OF THE LEVATOR PROSTATÆ.

By HAL C. WYMAN, M.D., Prof. of Phys. and Histology, Michigan College of Med., Detroit.

From the *Medical Age*, Jan. 10, 1885.—I shall mark out the way I desire to go by stating several propositions: (1.) About one old man in every five is made miserable by discomforts caused by enlargement of the prostate. (2.)

When old men affected in this way begin to use the catheter, they are apt to drop into a typhoid state and die. This has been designated by Sir Andrew Clark, of London, catheter fever. In a discussion upon its causes, which occurred in London, all advised extreme caution in conducting these old men into the catheter stage of their lives. It is singular that just as the philosophy of surgery has conducted him to a happy recovery, the old man turns round and dies. (8.) And why? Because the catheter has broken the mucous wall of the urethra and made a way for entrance into the system of putrid ferments. Now, two things are plain, viz., one class of old men use the catheter and get permanently better of their prostatic trouble, while another class use the instrument, get fever and die.

I desire to show that there are other and safer means of relieving the retention of urine due to enlargement of the prostate than the catheter. To make this clear I must submit what I believe to be the physiology of micturition obstructed by enlargement of the prostate. A common case will illustrate the point. An old man consults his doctor because his "kidneys are weak," as he expresses it. He says that his sleep has been disturbed by getting up at night to pass water, for several months past, and that he must stand and strain a long time before he can get more than a few drops. Then after he is tired out and ready to relinquish efforts quite a stream will pass, affording great relief. The more vigorous and determined his efforts, the more securely does the urine seem to be locked in the bladder. He has taken medicine. Turpentine, nitre, kidney cure, etc., have been tried, and are reported to have helped for a while. But all hope of relief through domestic remedies has been abandoned. He must have a doctor. You decide to examine the prostate and find that it is hypertrophied. The irritation incident to the examination provokes a desire to urinate. The patient struggles to his feet, grasps a vessel, and makes violent efforts to empty the bladder, but is delivered of a few drops only—a mere dribble. He sinks back on his couch, or reclines in a chair, groaning his disappointment. Then, when he has relinquished all efforts, he feels the urine trickling from the meatus, rises again or turns on his side, and is delighted to see a considerable stream flow from his bladder. The doctor completes his diagnosis of retention and decomposition of urine, due to hypertrophy of the prostate, by noting perhaps the presence of mucus, blood and pus in the urine. By way of treatment, he proceeds to instruct the patient in the use of catheter. The doctor tells him that his retained urine is what is making all the mischief. That the prostate is enlarged, and that just as soon as he has used the catheter a few times, and taken the tonics and balsams and anodynes that are prescribed, no urine being allowed to remain behind and decompose in the bladder, he will progress to a happy recovery; but, owing to the enlarged prostate which can't be cured, he may be obliged to maintain good the state of health by occasionally resorting to the use of the catheter whenever he finds he has not passed a sufficient quantity of water by his own efforts. The old man, as well as the doctor, is pleased with the prospects. In a day or two he proceeds to pass the instrument himself. It causes some pain and brings on straining—tenesmus. He decides to call the doctor again. Again he is relieved and is told to be patient and persevere. Several times this happens and several days have elapsed. His food doesn't taste right. His tongue is fevered. He has a chill, perhaps. The unpleasant symptoms are not due to retention for the catheter has been used at least once a day. Well, the old man goes on day after day—is no better, and at last he mutters incoherently, drops into coma, perhaps, and dies.

This is no uncommon picture. It is the catheter fever—septicæmia. Had the catheter been kept out of that man's bladder he would have lived longer. It broke the mucous wall of the urethra or bladder and made the way for sepsis.

There can be no doubt about the propriety of avoiding injury to the mucous wall of the urethra or bladder, in attempting to relieve the latter of its contents.

I believe it is possible to change the mechanism of micturition, when embarrassed by prostatic hypertrophy, by making a section of the prostatic

fascia and levator ani muscle so that the bladder may be entirely emptied without wounding the mucous wall of the urinary tract in the least.

Dr. Wyman then relates a case, and concludes his paper as follows:—I am now convinced that the operation which I made in the case just described, and which I thought at the time was a blunder, was a rational procedure, in perfect accord with physiological and surgical principles. This conviction leads me to offer the following views:

1. The tendon of the levator ani muscle unites with the central tendon of the perineum, and invests the prostate gland in such a manner that, when the prostate is enlarged, force is brought to bear upon it during efforts to evacuate the bladder, which rotates the prostate upon the urethra and shuts off the flow of urine.

2. A section of the perineum and its deep fascia and central tendon, will remove the force expended by the levator ani muscle in producing version of the prostate, and permit the muscles of the abdomen and bladder to evacuate the urine. Such a section implies tenotomy of what some anatomists call the *levator prostratus* muscle.

3. An operation of this character involves a breaking up of the veins and lymph spaces on the rectal and lateral aspect of the prostate, and, if the wound is made to granulate from the bottom, atrophy of the prostate will follow, so that by the time the tendon of the levator prostate has reunited, no further difficulty in micturition will be likely to ensue.

#### THE SIGNIFICANCE AND RADICAL CURE OF URETHRAL STRICTURE.

By H. W. STREETER, M.D., Rochester, N. Y.

From the *N. Y. Med. Jour.*, Dec. 13, 1884.—I would call your attention especially to the following points: "The normal caliber of the urethra; the importance of stricture of large caliber; the common dependence of gleet, vesical irritation, and of various reflex symptoms upon such strictures; the frequency of stricture in the anterior part of the canal, and its infrequency in the deep urethra; the possibility of a radical cure by dilating urethrotomy, and its great advantages over dilatation in regard to safety, comfort, time, and permanency of results" (Otis). Stricture is a contraction or want of distensibility of the urethra. The meatus is the narrowest part of the urethra. The normal caliber of the urethra is the caliber of the uncontracted meatus. Any instrument which will enter should pass the whole length freely. The term stricture is purely relative, and there is no fixed standard any more than there is for the mouth or vagina, for the hand or foot.

While no advocate of indiscriminate incisions of the meatus urinarius, I believe that we can not too carefully scrutinize every case, and that we should not neglect this condition as too trifling to be worthy of our notice, or omit to cut any meatus when contracted and accompanied by symptoms justly attributable thereto or for which there can be discovered no other cause. A very large proportion of all strictures are universally admitted to be located in the spongy, straight, or pendent urethra—*i. e.*, within the first five or six inches. Most cases treated as deep organic stricture have no actual existence. Gonorrhœa is the usual cause of stricture, although I think masturbation is much more frequently productive thereof than has been generally recognized. As a rule, gleet depends upon stricture, although the latter may exist without gleet. Henry Dick, of London, recognized this years ago. Sir Henry Thompson calls attention to its importance, and says it is often overlooked. Keyes and Bumstead indorse this opinion, and Otis says gleet *always* depends on stricture of greater or less degree. As long ago as 1850 Civiale called attention to reflex phenomena, dependent upon the slightest as well as upon marked strictures, and said their complete disappearance was so prompt after division of a slight stricture as to be almost incredible but for the frequent repetition of the instances.

The diagnosis is simple, yet in few conditions have errors been made. There is no danger of our being any too particular or scientific in diagnosis,

and we shall not lay too much stress on this subject if its consideration leads us to an accurate diagnosis of *something*, instead of covering up our ignorance and calming the patient's mind by vague and equivocal phrases. The unfavorable prognosis should never be pronounced until all the methods of modern research have been exhausted. The urethra should be explored with the bulbous bougie (and never should any other be depended upon, for it is impossible to make an accurate diagnosis with the common catheter or sound), and the location, thickness, and breadth of each stricture, if any exist, accurately measured. This instrument at once removes all doubt, and gives a most satisfactory sense of certainty, both physician and patient distinctly *feeling* any obstruction.

The object of treatment *has been*—first, to relieve the symptoms; second, to remove the cause, if possible. It *should be*, first, to remove the cause, and the symptoms will take care of themselves. As well attempt to remove a ligature tied *around* the penis by internal medication as to expect to remove an internal cord thereby. Rapid dilatation by tying in a catheter is painful, barbarous, and unscientific. Little has ever been claimed for it.

Electrolysis, though extravagantly heralded as a cure-all in the journals, is not indorsed by Thompson, Otis, Bumstead, Van Buren and Keyes, Gross, Holmes, Althaus, or Beard and Rockwell, the leading English and American authorities upon stricture, venereal surgery, or electricity, or any other standard authorities with which I am acquainted, and by most of them is entirely ignored. The consummate assurance displayed in some of these statements can only be explained by a mistaken diagnosis, a misinterpretation of the effects of the electricity for that of the dilatation or other means employed in conjunction therewith, or by the promptings of interested motives.

Gradual dilatation is and has been the standard treatment. While palliative, it can not be, nor has it ever been asserted to be, radical. There is no reason why dilatation should produce more than temporary benefit any more than in a similar external condition; in the latter it certainly would not be expected to do more. Divulsion is useless unless the stricture is ruptured. The passage of a full-sized sound (and any other is useless) is painful, repulsive, and liable to excite inflammation and leave the patient worse off than before. An external contracted band of tissue or a stricture meatus is severed by the knife, without a thought of stretching, caustics, electrolysis, or other treatment.

There has been no reason why the analogous internal cord should not be divided, except the want, till comparatively recently, of suitable instruments. As with the external cord, the stricture must be completely severed, and as little adjacent tissue as possible. If a repetition of the operation is required, it is due to imperfect division of the contractile band or to complications. It *should be radical* in every case, unless there are serious complications, and that it has been in a very large percentage is shown by the large number of cases reported, and re-examined at intervals of several years, by Professors Otis, Brown, Pease, and others.

### CHRONIC CYSTITIS.

By DUNCAN EVE, M.D., Prof. of Surg. and Clin. Surg. in the Med. Department of the Univ. of Tenn., Nashville.

From the *Southern Practitioner*, January, 1885.—Cystitis presents itself in two prominent forms—the acute and chronic. We propose to examine the latter only, referring incidentally to the former.

Of all the causes, I desire to call the especial attention of the profession to the fact, that in my experience, strictures of the urethra and prostatic enlargements, resulting from gonorrhœal attacks, are by far the most prolific factors in the causation of *chronic cystitis*. My experience extending over many years, and quite a number of cases confirm me in this opinion. Now, just why this is so, I cannot tell, and simply desire, as stated above, to earnestly call the attention of the profession to it, hoping that some investigation may throw some light upon the subject.

This disease, when finally established, manifests itself by pains of a dull character in the region of the affected organ, the secretion and discharge of the characteristic ropy mucous, mixed with pus and streaked with blood, and more or less tenesmus, consequent upon the act of micturition.

In the treatment of this affection the main point for us first to consider is, that it is a secondary lesion, and any mode of treatment not based upon this consideration, would certainly fail of success. Therefore, a careful examination should be instituted with this view. Should we find calculus, stricture, hypertrophy of the prostate or disease of adjacent organs to exist, it would be more than folly to expect any decided relief to the secondary, before the primary lesion had been removed.

Many plans of treatment have been suggested, among these may be noted antiphlogistics, sedatives, diuretics, counter irritation by blisters and issues, remedies administered particularly with a view of changing the chemical constitution of the urine, warm fomentations to the parts, etc. Some, or all of these are to be employed, preliminary to means addressed to the bladder itself, with a view of relieving the condition. The means employed for this purpose have been irrigation, cauterization, and the introduction of various astringent injections. All the means thus employed are eminently proper, and could not fail of effecting relief, possibly cures, but in consulting authors the practitioner becomes perfectly bewildered by the great variety of drugs selected for this purpose, *Materia medica* has been ransacked to find the *great remedy*. Scarcely a diuretic in the whole list but has had some champion to laud its praises.

We desire now to make a few simple and practical suggestions in regard to the treatment of this troublesome affection, not ignoring the various remedies above suggested by our friends, the authors, but gladly welcoming many of them as highly valuable adjuncts in our treatment. It is admitted by all that obstruction to a free flow of urine is, in nearly every case, the cause of chronic cystitis; therefore, I insist that our first object should be to determine definitely what that obstruction is; and, secondly, so soon as our patient is in proper condition, then to endeavor to remove it and establish perfect drainage preparatory to further action.

I have said that in the large majority of cases coming under my observation and treatment, stricture, particularly gonorrhœal, has constituted the primal lesion. Now, how can that stricture be best removed? Assuming that my patient has received proper preparatory treatment, I answer unhesitatingly, dilatation, divulsion or electricity, and not the knife.

My father, the late Prof. Paul F. Eve, M. D., first suggested the perineal section for the relief of chronic cystitis. He practiced the plan with marked success, and I have followed in his footsteps with equally gratifying results. The operation proposed by my father, was the usual bi-lateral operation as if performed for lithotomy. I have performed the operation frequently, in cases when I could not secure proper drainage, with the most gratifying results. The operation having been performed and our patient quieted, the bladder should be washed out by warm water, to which listerine has been added, a weak solution of carbolic acid, or bi-borate of soda. After stricture has been relieved I have been in the habit of using injections of nit. arg. in the bladder, commencing with a five grain solution to the ounce of distilled water, increasing strength, until I was satisfied that the perineal section was imperative. The strength of this solution may be increased to 40 and even to 60 grains to the ounce, the patient taking a warm hip bath immediately afterward. These injections I am in the habit of continuing even after the performance of the perineal section, should they seem to be indicated.

#### BELLADONNA INJECTION FOR GONORRHOEA.

From the *Nashville Jour. of Med. and Surg.*, Feb., 1885.—Some thirteen years ago an officer on board one of the vessels of the Indus Steam Flotilla consulted me for a bad gonorrhœa with intense pain on micturition, and intolerable chordæ at night. The case was urgent and I ordered an injection composed of seven ounces of water, an ounce of mucilage acacia, twenty

grains extract of belladonna, and twenty grains sulphate zinc, a teaspoonful to be injected immediately before and after micturating, and a similar amount the last thing at night, great care to be used in passing the injection fully down as far as the pain was most intense. An ointment of spermaceti and mercurial ointment, four drachms each, and ten grains extract belladonna, ten grains powdered opium, a paste to be smeared along the perineum and around the crura penis at night. Patient left next morning, having had no chordee that night, and the pain of micturition disappeared by using the injection. Within a week there was complete cure. From that time I have had numerous gonorrhoeal cases of every type and stage, and I have used the injection in every instance, and without exception, with unfailing success.—*John Roche, M. D., in Medical Press.*

### A NEW METHOD OF STRAPPING THE TESTICLE.

By WM. BARTON HOPKINS, M. D., Surg. to the Episcopal Hosp. and Out-Department of the Penn. Hosp.

From the *Medical Times*, Feb. 7, 1885.—The advantages it possesses over the other forms of elastic pressure which have been employed, as the rubber bandage and the compressing-bag, are the perfect uniformity of pressure which can be exerted upon the entire organ, and the readiness with which it may be adapted to any case.

Two adhesive strips three-quarters of an inch in width are first made to encircle the scrotum at the upper portion of the testicle, in order to hold the latter well down in the bottom of the scrotal sac, as in the ordinary method, and to form an unyielding base of support for the elastic pressure to act upon. The testicle being thus fixed, four bands of rubber are applied. These are made of "bandage-gum" cut into strips of the required length, an inch and a quarter wide, and retained with "rubbed cement." A few drops of the cement are rapidly and thinly spread upon a strip with a spatula, and a few drops more upon the adhesive plaster and skin of the scrotum. These surfaces are allowed to nearly dry, care being taken that the rubber meanwhile does not curl up on itself and stick fast. One extremity of the strip is then placed upon the adhesive plaster posteriorly, carried forward beneath the testicle, and fixed in front. Another is applied in like manner laterally, and two more obliquely, four being usually sufficient to cover in the organ.

As with India-rubber used elsewhere for a permanent dressing to induce pressure, great caution must be exercised not to constrict the parts too firmly; about four ounces traction on each strip when the dressing is completed being sufficient to aggregate the maximum pressure likely to be required.

### SYPHILITIC AFFECTIONS.

#### CEREBRAL SYPHILIS.

By JAMES T. WHITTAKER, M.D., Prof. of the Theory and Practice of Medicine, Med. Coll. of Ohio.

From the *New England Medical Monthly*, Jan. 1885.—Let me say first, and emphasize it as much as I may, that whenever a person who is over forty, presents himself to you with epileptic seizures, you should at once look for something more than epilepsy as an explanation. Epilepsy is such a prominent, such an alarming symptom with the people, that it calls for the physician at once. When you are called to a case like this you will first inquire whether the patient has ever had epilepsy before, at any time in childhood especially, and if not, you at once suspect syphilis. For the brain is one of the organs most frequently affected by syphilis. Next to the liver it is the most frequently attacked by this disease. If in such a case you could exclude syphilis, you would next look for trauma; if you could exclude trauma, you are forced to look for a much rarer affection, a brain tumor, abscess, or other organic lesion, or hydatids, the cysticerous.

Generally the patient comes to you with the marks of syphilis so plainly visible on the face or elsewhere that you could make no mistake. The patient's affirmation or denial amounts to nothing at all. The brain lesions of syphilis are not always plain. You do not always find the symptoms of epilepsy and aphasia to declare the disease. You do not always find affections of the oculomotor and facial nerves. Syphilis affects the brain in a great many forms. In the first place, it may affect the bones of the cranium. A disease of the bones may cause abscess of the brain. Then a man may have a lesion of the bones which will plug up the sinuses. We can usually detect a bone syphilis. It has a singular predilection for the frontal bone. Next to the shin bone, the frontal bone is more frequently the seat of syphilis than any bone in the body; the sternum comes next. Syphilis also attacks the membranes of the brain. It attacks them much more frequently indeed, than it attacks the bones. It attacks by preference the dura mater. It forms a gummatous mass between the layers of the dura mater, and this may protrude outward toward the bone or inward toward the brain. It does not always, however, confine itself to the membranes and when it does attack the membranes, it does not always confine itself to the dura mater. In the great majority of cases, syphilis attacks the vessels; the basilar arteries are its most frequent location, and the arteries especially which go to form the circle of Willis. It is the rule when it attacks the vessels anywhere that it produces a thickening of the vessel-walls. Baumgarten made a thorough study of brain syphilis. He described the great thickening of the intima inward, occluding the calibre of the vessels, and he named the disease of the vessel endarteritis *proliferans*. Friedlander calls it endarteritis *obliterans*, because the thickening of the vessel blocks it up or leads to the formation of a thrombus.

The sylvian artery is a most frequent seat of the disease, and this explains the frequency of aphasia. Syphilis of the brain is one of the late manifestations of the disease. It comes on sometimes twenty or thirty years after the individual has observed the first symptoms of the disease, so long ago indeed, that he may even have forgotten that he ever had it. But he has not forgotten it as a rule. In more rare cases the nervous system has been attacked first, even immediately after the initial symptoms of syphilis have been observed. Facial paralysis thus following immediately the first stage of the disease has been reported by Fournier. This quick exhibit of nerve lesion is possible, but it is not the rule. If you ever see an individual suddenly affected with aphasia with no paralysis anywhere, you can put it down as a rule almost without exception, that the individual has syphilis of the brain. In such cases there is not even any paralysis of the muscles of the tongue. This is owing to the fact as I have said that the endarteritis so frequently attacks the vessels that run in the fissure of Sylvius. It is transitory because the quantity of blood circulating through the vessel varies from time to time.

Next in frequency, the muscles of the eye are affected by syphilis. The oculo-motor muscles are in syphilis the most frequently affected. Next the abducent with their characteristic phenomena, and then come the muscles of the face. Sometimes the intrinsic muscles of the eye are alone affected, and this is a point to remember. Sometime even the most careful ophthalmoscopic examination of the eye fails to reveal any lesion whatever; we are unable to find any apparent cause for the difficulty of vision, and we must call the trouble a functional disorder.

One of the most important symptoms of syphilis is the fact that the affection of the eye as elsewhere, comes on suddenly, but still more distinctive is the fact that it clears up promptly under treatment.

Somnolence is another symptom of cerebral syphilis. This is a symptom that occurs very often. Occasionally, though exceptionally however, we see the very opposite condition, that of insomnia.

Not unfrequently we have paralysis; there is a syphilitic hemiplegia and paraplegia. More characteristic are the monoplegias, as of the eye, of the face, sometimes of the arm. It is not so much a paralysis in most cases as it is a paresis. The individuals are able to get up as a rule and walk, but some-



times they are completely paralyzed. Wherever you meet with a paralysis of a single muscle, you would suspect syphilis at once.

These patients complain also of numbness, of fornication and there are sensations of cold and heat, with all kinds of paræsthesiæ as indications of involvement of the sensory nerves. Yet sensory lesions are much more rare than motor in syphilis of the brain, for the simple reason that the vessels affected supply motor and not sensory areas.

There is as a rule little difficulty in recognizing brain syphilis even by a superficial examination. Of course it is possible for a brain tumor or other brain disease to produce epilepsy, but not epilepsy with aphasia and eye paralysis, all of sudden onset.

Put the patient on specific treatment in all cases, mercury or iodide of potassium or both, and you may be able to prevent the advancement of the disease even if you may not cure it. They do not always get well, however, and the prognosis is always grave.

### SOME POINTS IN THE RELATION OF SYPHILIS TO PULMONARY DISEASES.

By JOHN FERGUSON, M.D., L.R.C.P., Asst. Demonstrator of Anatomy in the Toronto School of Medicine, Toronto, Canada.

From the *Med. News*, Jan. 17, 1885.—That there is often a very close relationship between diseases of the lungs and syphilis has for considerable time occupied my attention. We have all met with cases of pulmonary trouble that may have baffled us to find a satisfactory cause. A case that is diagnosed as phthisis occurs in one member of a family, all the others being in perfect health. There may not be the slightest trace of consumption in the ancestry; nor has the person, who comes under our care, been so employed as to lead to the suspicion that his disease has arisen from such employment.

The difficulty of tracing to their true origin such cases of chronic lung disease as these, when we can find no evidence of another case in the family record, is sometimes very great, if not wholly impossible. One or other of the parents or grandparents may have had syphilis, and the fact be beyond our reach. There is no doubt, however, that the offspring of such parent or parents suffer differently. One has eruptions of the skin, another caries of the bone, a third obscure and obstinate nerve lesions, while a fourth has, as I shall try to show further on, disease of the respiratory organs. Nor is it necessary that the syphilis be inherited to cause lung disease. The person who contracts syphilis may suffer thus in his own lifetime. Dr. Ferguson gives several interesting cases and concludes his paper with the following statement:

I strongly believe that the low state of health which often leads up to consumption is, in not a few cases, due to inherited syphilis. This is the blighting cause that undermines the general condition of body nutrition, which so often precedes phthisis. The late Dr. Gross taught that scrofulosis was often a run-out syphilis, or this taint became weakened by passing through several generations. Just so I think with a certain percentage of tubercular cases.

The proportion of consumptive cases that are due to syphilis, I cannot in the least say, as my statistics are not sufficiently extended. This would require a long series of cases, and much time. "Nor do I know the percentage of those chronic lung diseases, due to syphilis, that would yield to specific treatment. There is no doubt of the fact that many such cases, like syphilitic lesions elsewhere, would recover; while, at the same time, others would not. For example, where the syphilitic taint is remote, it might so act as to produce only a predisposition; and the phthisis, being excited into existence by such conditions as we know to give rise to it, might be incurable. The more recent the syphilis, the more likely would treatment, directed toward it, be successful in arresting pulmonary disease that might have arisen from it. On the other hand, the syphilitic taint coming from a grandparent would show itself in little else than a mere cachexia. On this cachexia, true tuberculosis or other chronic lung disease being implanted, the prospects of treatment would be very much less promising, as it would approach more nearly a case of phthisis, and less one of syphilis.

## TRANSMISSION OF SYPHILIS.

Kassowitz, of Vienna, formulates the mooted points of this question as follows: 1. The observation of many physicians, especially pediatric practitioners, proves that women, who never exhibited symptoms of syphilis give birth to syphilitic children. In these cases there is no doubt that the virus is contained in the spermatic secretion of the father.

2. In many cases the mother subsequently shows no syphilis. Therefore in such cases no infection of the mother by the child has taken place.

3. A re-infection of the mother by the fetus is theoretically possible but not definitely proven.

4. However, it is beyond doubt, that those mothers of syphilitic children, that never showed symptoms of syphilis, are much less receptive for syphilitic infection than other individuals.

5. Such women are not to be considered in a latent syphilitic state, because first: All objective signs are wanting; and second; They give birth to healthy children when impregnated by a healthy male.

6. It is a fact that women with recent syphilis may give birth to healthy children. The virus is not transmitted from mother to child in such cases; and such children have a certain degree of immunity to syphilitic infection.

7. In some few cases a transmission of the virus from the mother, that was infected during pregnancy, to the healthy fetus has been proven,—*Weekly Med. Review.*

## AFFECTIONS OF THE EYE.

## ON BLEPHARITIS MARGINALIS,—INFLAMMATION OF THE MARGIN OF THE EYELIDS.

By W. F. MITTENDORF, M.D., Surg. to the N. Y. Eye and Ear Infirmary.

From the *Philadelphia Medical Times*, Dec. 13, 1884.—Among all affections of the eyes, those of the lids, and especially those affecting their free margin, are the ones most frequently met with. This is due, to a great extent, to the exposed position of the lids, and to the large number of glands which are found, especially along their free edge.

The treatment of these affections must differ according to the cause and nature of the disease. The first indication is the removal of the crusts. This should be done very carefully, after softening them by the use of warm water or olive oil.

In *simple* blepharadenitis one of the best remedies is liquor plumbi subacetatis, used in the following way:  $\mathcal{R}$  Liq. plumbi subac.,  $\mathfrak{f}$  3j. Sig. Six drops to half a tumbler of water. Use as an eye-lotion five or six times a day for four or five minutes at a time.

To prevent the gluing together of the lids, as well as to protect the inflamed parts, the following, known as *Pagenstecher's ointment*, will act very nicely:  $\mathcal{R}$  Hydrarg. oxid. rubri, gr. j; vaseline, 3j. Fiat unguent. Sig. Apply before retiring. It is necessary that the lid be thoroughly cleaned and dried before it is applied. To effect this object, the eye may be washed with  $\mathcal{R}$  Sodii bicarbon., 3j; aq. camphoræ,  $\mathfrak{f}$   $\frac{3}{4}$  viij. M. Sig. Use at night.

The proportion may be made a little stronger when the yellow oxide is used, because it is not quite so powerful in its action.

$\mathcal{R}$  Hydrarg. oxid. flavi, gr. iss; ung. simpl., 3j. M. Fiat unguent. Sig. Apply to the edge of the lid before retiring.

An inflammation of the lids of this kind will frequently extend to the conjunctiva. In this case, use a preparation which can be applied in the conjunctival sac.  $\mathcal{R}$  Sodii biborat., gr. xx; mucilag. cydon., aq. laurocerasi,  $\mathfrak{ss}$   $\mathfrak{f}$   $\frac{3}{4}$  ss; aq. camphoræ, q. s. ad  $\mathfrak{f}$   $\frac{3}{4}$  iij. M. Sig. Use as an eye-lotion three times a day.

This should not only be applied to the free edge of the lid, but some of it should be allowed to enter the conjunctival sac. The action of the cherry-laurel water is that of a mild anodyne, of the mucilage of quince-seeds soothing, of the camphor-water slightly stimulating, while the bichlorate of soda is astringent.

If we have the condition, which may justly be termed *eczema of the lid* (in children arising from scratching the eyelids constantly), use a preparation which contains morphine or some anodyne, and in this case we can use a stronger preparation of mercury:

R Hydrarg. oxid. rubri, gr. v; morph. sulph., gr. iss; unguent. simpl., ℥ss. M. Fiat unguent. Sig. Apply, after removing the scab and drying the parts carefully, to the excoriated parts.

There is one form of blepharadenitis which we cannot expect to cure entirely, namely, that in which the free edge of the lid is completely altered. In these cases you can only relieve the trouble partially, allay active inflammation, without being able to change the cicatricial conditions.

I have spoken of the *squamous* form of blepharadenitis. Here it is absolutely necessary to correct any error of refraction which may exist. The adjustment of glasses for such patients is fully as important as any local remedies which you may resort to. I have also found of great value in these cases a stimulating lotion composed as follows: R Spir. vini gallici, spir. lavand. simpl., aa f ℥ss; spir. rosmar. simpl., f ℥ij. M. Sig. Apply to the lids morning and evening. When applying this lotion to the lids the eye should be tightly closed. If you will tell your patient to allow a few drops to evaporate from the palms of the hands, holding the hands up to eyes, opening and closing the eyelids so as to allow the vapors to come in contact with the free edge of the lids very thoroughly, it will produce a better effect.

In those cases where there is a certain amount of redness remaining, all active inflammatory process, however, having subsided, a preparation of the following kind will have a good effect: R Ol. cadini, gtt. v; ungt. simpl., 3j. M. Fiat unguent. Sig. Apply at night.

All these ointments should be used at night, and should be cleaned off the lid the next morning by washing with water containing a little bicarbonate of soda or Castile soap.

## THE REMOVAL OF THE CATARACTOUS CRYSTALLINE LENS IN ITS CAPSULE.

By D. B. ST. JOHN ROSEA, M.D., LL.D., Surg. to the Manhattan Eye and Ear Hosp., New York.

From the *Medical Record*, Feb. 7, 1885.—If we can find an operation that will safely remove the lens in its capsule, without the introduction of an instrument into the eye, either to cut off a piece of the iris, or to scoop out the lens, I think we shall make an advance in ophthalmic surgery. I have performed in twenty-four cases what I think may be such an operation. I am not ready to claim that it is a substitute for the other methods in all cases of senile cataract, but I think in quite a large proportion it is a better operation than has yet been proposed. My method of removing the lens in its capsule is as follows:

*First*.—After inserting the speculum and holding the eye in the usual way with the fixation forceps, using a Graefe cataract knife, I make a large flap of the cornea, if possible, one involving one-half of its circumference, and entirely in that tissue. After transfixion, and when the section is about half completed, the back of the knife is deliberately turned so as to rest almost vertically upon the iris and crystalline lens, and some pressure is made with a view of rupturing the zonula, and dislocating the lens. The section is then finished.

*Second*.—The lens is then pressed out of the opening by pressing upon the lower lip of the wound, and upon the cornea, the lens being followed up in the usual manner. The pressure is made by two india-rubber spoons, used, of course, at the same time. I think the dread of too great pressure upon the cornea for the purpose of forcing out the lens is unduly great in the

minds of those who have been accustomed to accompany all their operations for cataract with an iridectomy. Since I have begun to perform this operation, I have failed in a few instances to remove the lens without first dividing the capsule. That is to say, I have found that the pressure to be exerted was too great to admit of its being continued without pushing out at the same time the vitreous humor. I think that this was generally due to the fact that the corneal incision was too small. In a few others I have also been obliged to add to the operative division of the capsule an iridectomy. But since the first of October, I have not failed in any case to remove the lens in its capsule by the method described, when I have set out to do so. I do not now think that it is as dangerous an operation as the ordinary one. The vitreous humor is not so apt to escape as when the capsule is divided, and an iridectomy performed. To my mind the operation of iridectomy, to assist in the removal of a cataract, is a detraction from that which without it is a singularly brilliant surgical exploit.

#### COCAINE HYDROCHLORATE.

Dr. H. F. Hansell, of Philadelphia, in the *Polyclinic* for January 15, 1885, gives the following conclusions and guides for its application: (1) Two, or at most, four drops of a two per cent. solution (gr. ix- $\frac{3}{4}$  j) dropped into the conjunctival sac at one sitting, is the requisite quantity and strength. (2) The interval between the instillation and the commencement of the operation should not exceed three minutes. (3) Anæsthesia of superficial parts of the eye can be complete, while that of other mucous membranes and the skin is partial or entirely absent. (4) Rubbing is the simplest method of applying to skin. (5) Dilatation of pupil and partial (very slight) loss of accommodation are induced in ten minutes, and continue less than twenty-four hours. (6) No injurious effects follow.

A vegetable growth forms in the solution, which, however, does not impair its activity.

#### JEQUIRITY AS A REMEDY FOR GRANULAR LIDS WITH PANNUS.

By DAVID WEBSTER, M.D., Prof. of Diseases of the Eye, in the New York Polyclinic.

From the *Medical Record*, Feb. 14, 1885.—The remedy is applicable to cases of obstinate and inveterate granular lids with pannus, and in many such cases its curative effects will be found to be little short of the marvellous.

The remedy is not entirely free from danger, however, and should always be used intelligently and with care. Some of the most skillful ophthalmic surgeons, at home and abroad, have lost eyes from its use; but that was when not so much was known of the effects of the drug as at present, and when they were experimenting with stronger solutions, and in many different kinds of diseases of the eye.

I think if the physician will observe the following rules he will find the remedy efficacious, without being very dangerous: (1) Use the drug only in cases in which considerable pannus exists. (2) Use nothing stronger than a one-fourth of one per cent. solution. (3) Make the application only once a day, and do not repeat it after the characteristic inflammatory reaction begins to show itself.

If we use one jequirity bean to the ounce of water in making our infusion, we get a solution of very nearly one-fourth of one per cent. in strength. As the preparation is apt to become worthless after it has stood for more than a week, it has been my practice to have it made up fresh for each patient, and for this one jequirity bean, finely powdered and put in an ounce of cold water, is sufficient. After standing from four to six hours the solution should be filtered and is fit for use.

The infusion should be applied very thoroughly. I usually paint some of it upon the everted eyelids by means of a little cotton twisted about the end of a small stick, and then let the patient bathe the lids with the rest of the

infusion for five or ten minutes. This process should be repeated once a day until the jequiritic inflammation is produced. Generally only one application is needed. The next day the patient will show more or less general febrile disturbance, the eyes will be irritable and watery, the lids more or less swollen, and the conjunctiva covered with a thin whitish membrane.

As before stated, this condition being brought about, I do not repeat the application. If the symptoms are not severe, I do nothing but have the eyes bathed from time to time with hot water. If there is considerable pain and a good deal of swelling of the lids, I apply iced cloths and atropine. The inflammation subsides in a few days, and with its subsidence the granulations and the pannus rapidly disappear. If after a month or two the improvement seems to have ceased, and the cure is imperfect, some vascularity of the cornea still remaining, the application may be repeated with further benefit. Of course it does not cure in all cases.

## AFFECTIONS OF THE EAR.

### CHRONIC SUPPURATION OF THE MIDDLE EAR.—CONSIDERATION OF MASTOID DISEASE.

By R. MAUPIN FRANKSON, M.D., Surg. to the Eye, Ear, and Throat Department of the Louisville City Hospital.

From the *Louisville Med. News*, Jan. 31, 1885:—There is no doubt that the origin of all this trouble was a purulent inflammation of the middle ear, as is indicated by the fact of the membrane being perforated, the malleus being carious, and by the presence of pus in the tympanic cavity at the post-mortem. Caries of these parts as a primary affection is a very rare occurrence. Cases of mastoid trouble almost invariably have their origin in inflammation and suppuration in the middle ear, extending into the mastoid cells.

The usual symptoms of mastoid trouble are, that after a running from the ear has existed for some time, varying from a very few days to many years, the most excruciating pain occurs in the mastoid process, which may, however, be reflected to other parts, or at least be most prominent in other regions, as in the occiput or over the vertex, etc. In addition to the pain, there is generally much heat, redness, and edema. These symptoms vary, however, in individual cases greatly with regard to their severity.

When such cases come under observation various conditions may be present. More generally, however, we merely find the symptoms above enumerated in conjunction with a perforated membrane and suppurating middle ear.

It is a matter of vital importance that the condition be promptly recognized, and means taken at once for the evacuation of the pus, for, though the condition may exist for some time without doing much harm, still death may take place in a very few hours.

When such symptoms present themselves the Wilde incision should at once be made. This is a deep incision, about one-half of an inch behind the ear, down through the periosteum to the bone. When there is much edema, the incision must at times be surprisingly deep. Cases relieved by the Wilde incision are most probably cases of periostitis, but the symptoms of the two affections are so similar that the incision should as a rule be resorted to before the trephining.

After making the incision, if any rough denuded bone be found it should be carefully removed, or if a fistula leading into the mastoid be found it should be sufficiently enlarged to allow a free exit to the pus, and a drainage-tube inserted and allowed to remain.

In case no relief, or only slight benefit, is gained by this procedure, or in case the Wilde incision should give but temporary relief, the trouble recurring again and again, the mastoid must be opened at once, for there is much danger in delay.

Whenever a fistulous opening is present, it is only necessary to enlarge this and give free vent to the pus. When no fistula is present an opening must be made behind the external canal. Schwartze, who has had more experience with this operation than any one else, advises the opening to be made "at the level of the external canal and slightly behind the attachment of the auricle." Feeling over the external surface of the mastoid, a slight depression is perceived, into which the finger falls. This is the most appropriate point for opening the mastoid. The instrument should be directed downward, forward, and inward, in the direction of the axis of the petrous portion of the temporal bone.

There is quite a wide variation in the relations of the different parts of the temporal bone and the important organs, vessels, etc., which are endangered in this operation, so that there is ever some danger attached to the operation, and it should always be conducted very slowly, with frequent removal of the instrument to see how much progress has been made and to be certain of the direction.

After the mastoid has been opened it must be gently cleansed by syringing with lukewarm water containing a small quantity of salt (3 j to aq. Oj), as pure water is somewhat irritating to the mucous membrane. Generally in a few days, if not at once, the water will be found to pass through the Eustachian tube.

In many cases death can be prevented by the timely performance of this operation.

If, after passing to the depth of six or seven lines (two centimeters), no pus is found, it is recommended to stop the operation. It has been found, however, that even where no pus is obtained the operation has a decidedly favorable effect. In the cases operated on by Schwartze he obtained 70 per cent. cures, 10 per cent. improvement, and 20 per cent. ended in death.

A matter of prime importance is the prevention of mastoid trouble, and the most efficient means at our service are cleanliness and drainage. The pus must be removed from the middle ear. This may be done by means of syringing the cavity from the external canal, or by washing out the cavity through the Eustachian tube. A very valuable means of cleansing the tympanum is the forcing of air into the middle ear through the Eustachian catheter, or by Politzer's method. If the perforation be very small, or if it be unfavorably situated, as in the upper segment (as was the case in the patient at the Hospital), a large free incision should be made in the drum membrane in the lower and posterior segment, so as to give a free vent to the pus. In addition, appropriate treatment must be directed to the pathological condition dependent on the character of the affection and various other circumstances.

In general, the most effective methods of treating old cases of purulent middle-ear trouble are the use of a solution of nitrate of silver, increasing it gradually from ten grains to the ounce to sixty, one hundred and twenty, or even greater strength in rare cases, the boracic-acid treatment, and treatment by rectified spirits.

All such affections require the closest and most constant attention, and the patient should be informed with regard to the various complications which may arise, so that they may understand the seriousness of the affection and be on the lookout for untoward symptoms, that timely aid may be administered and death from a "simple running from the ear" be prevented. The statement of Wilde that "SO LONG AS A RUNNING FROM THE EAR IS PRESENT, WE CAN NEVER SAY HOW, WHEN, OR WHERE IT WILL END, NOR TO WHAT IT MAY LEAD," should be committed to memory by every practitioner of medicine, as well as by every patient suffering from purulent middle-ear disease.

#### TROPHIC ULCERATION OF THE HELIX.

In the proceedings of the *N. Y. Path. Soc.*, published Dec. 20, 1884.—Dr. E. C. Seguin reports a case of anæsthesia of the left trigeminus with trophic ulceration of the helix. The patient was a man forty years of age, who had had partial anæsthesia of the left trigeminus, left occipitalis major and minor

nerves, of left superficial cervical plexus, and of left ulnar and median distribution for a year. The external ear is almost totally insensible. A few weeks ago a small "blister" appeared on the left external ear, in the lower third of the fossa of the helix. This has become an ulcer, which my colleague at the Manhattan Eye and Ear Hospital, Dr. Pomeroy (by whose courtesy he had seen the case) designated perichondritis and chondritis with perforation. There are no signs of ordinary hæmatoma. Under a dressing with bichloride of mercury lotion the ulcerative process has been arrested and repair is progressing. The only other symptom presented by the patient is paralysis of the left vocal cord, dating back six years to an attack of hoarseness. The man had never had syphilis, and the pathology of his anæsthesia (which certainly is not hysterical hemi-anæsthesia) was, he confessed, quite obscure. From the absence of neuralgia he was disposed to exclude disease of the trunk of the trigeminus or of the Gasserian ganglia. The ulcerations of the cornea (and phthisis bulbi) coexisting with trigeminal anæsthesia are well known, though rare. To his present knowledge this case was unique.

### HEARING IN A NOISE.

By D. B. ST. JOHN ROOSA, M.D., LL.D., Prof. Diseases of the Eye and Ear in the N. Y. Post-Graduate Med. School.

Review in the *Louisville Med. News*, Feb. 7, 1885.—After a careful study of many cases of this kind he formulates the following conclusions: (1) "There is a large class of people suffering from impairment of hearing in quiet places who hear very acutely and with comfort amid a great din or noise. (2.) "The disease causing the impairment of hearing thus relieved is situated in the middle ear. It is usually observed in the chronic non-suppurative form of disease of the middle ear, but may also be found in acute or subacute catarrh of this part, as well as in a chronic suppurative process with loss of the whole or part of the membrana tympani. (3.) "The proximate cause of the phenomenon is not as yet positively known. It is probably to be found in some change in the action of the articulations of the *ossicula auditus*."

CHRONIC NON-SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.—Dr. Roosa, backed by twenty years' experience, thus sums up the prognosis: (1.) "Chronic catarrhal inflammation in young subjects is susceptible of relief and cure in a large proportion of cases. (2.) "Chronic catarrhal inflammation in adults is susceptible of relief and alleviation in about twenty per cent. of the cases, of cure in none. (3.) "Chronic proliferous inflammation remains as yet incurable and is not susceptible of alleviation or relief either in the young or old subjects in more than five per cent."

In discussing the treatment of chronic suppuration, the author takes issue with those of the present day who have discarded the syringe. He claims that the prerequisite is cleanliness, also that astringents in solution are indicated in many cases; if these do not good service, powders may be found to act well. Of these boric acid is good, "but it is by no means a panacea."

### AFFECTIONS OF THE SKIN.

#### THE TREATMENT OF ACNE.

By HENRY J. REYNOLDS, M.D., Prof. of Dermatology in the Coll. of Phys. and Surgs., Chicago, Ill.

From the *Western Med. Reporter*, Jan. 1885.—In those forms, described by various authors as *Acne indurata*, *acne cachecticorum*, etc., the true lesion will be found to be *papulo-pustular*, the nodular induration containing, deep under the skin, pus; assuming in reality the character of a dermic or sub-cutaneous abscess. These lesions can never be cured by topical applications,

internal remedies, nor by the two combined. They must be treated upon surgical principles. They must be cut, and deep enough, if it be a quarter of an inch, to open into the pus sack, which may be quite small. Will they get well then? Not necessarily, although this is the only operative treatment usually laid down in the books. There is only one sure way, and it is sure in every instance, and that is to destroy the diseased tissues and have the lesions heal from the bottom, I am in the habit of lancing deeply, being to strike the centre of the nodular enlargement, with a Graefe's cataract knife, squeezing out the contents, touching the bottom with a probe dipped into strong carbolic acid, then inserting a piece of absorbent cotton just large enough to fill the incision from bottom to top, and covering the whole with plaster. This he removes in thirty-six hours. This is about all that is necessary; if they seem inclined to close at the top too soon they can very readily be kept open by the gentle use of the probe, the hot water bathing of the parts and other processes laid down in the books being kept up in the meantime as thought advisable. The same treatment also works well with the more superficial and common pustular lesion of acne in many cases, by destroying at once the sebaceous glandules and follicular structures which might otherwise ultimately develop into lesions similar to the above. Occurring in connection with the *hyperæmic maculae of acne rosacea*, as these lesions sometimes do, the treatment has the advantage of generally destroying the macular condition. No visible scars of any consequence are caused by the process.

#### THE TREATMENT OF PSORIASIS.

From the *Phys. and Surg. Investigator*.—Among the many inconveniences met with in the local treatment of psoriasis has been the difficulty of keeping the medical agent in constant contact with the seat of disease, and at the same time preventing the patient's linen from being discolored by the application. Since the introduction of traumaticine as a protective, this difficulty has been almost entirely overcome. Traumaticine is a 10 *per cent.* solution of purified gutta-percha in chloroform, and should be thickly painted over the patches to which the active medicinal agent has been already applied. The painting should extend beyond the border of each patch so as to prevent the previous local application from spreading beyond the necessary limits and thus staining the sound skin or soiling the linen. The pellicle formed by traumaticine is more delicate and flexible than when either colloidal or gelatine is used for the same purpose.

Chrysophanic acid, probably, holds the first place in the list of new remedies employed in the treatment of psoriasis. The psoriatic patch should first be washed in a soap-lotion and brushed well so as to detach as many scales as possible. Then a ten *per cent.* solution of chrysophanic acid in chloroform should be brushed well into the patch so that when the chloroform will have evaporated, each patch will be loaded with the pure acid and have the color of iodoform. A thick layer of traumaticine is now applied as a protective. If the patches be small and few this treatment may be repeated daily, but if large and numerous, once in two or three days will be sufficient. After from three to a dozen applications the scales disappear, and are replaced by white patches with violet-brown borders.

Chrysarobin is another much wanted remedy in the treatment of psoriasis. After the patches have been washed and prepared as above, a 15 *per cent.* solution of chrysarobin in chloroform is applied with a common paint brush to the parts, and traumaticine protective, painted on as soon as the chloroform in the first solution has evaporated.

The above drugs generally succeed rapidly in cases of moderate infiltration, but in cases where the scales are abundant and the patches thick and deeply infiltrated, the profession look for happier results from a 10 *per cent.* solution of pyrogalllic acid in ether. This, too, is covered by a layer of traumaticine. We must be more cautious, however, in applying pyrogalllic acid than we are when using either chrysophanic acid or chrysarobin, because



several cases have been reported in which fatal results followed its absorption. This, however, need not deter us from using the remedy within moderate limits and with due respect to the amount of raw or bleeding surface to which it is applied.

### TREATMENT OF ECZEMA RUBRUM.

By JOHN H. DUNCAN, M.D., Prof. of Diseases of the Skin and of Physiology in the Med. Dep. of the Univ. of Kansas City.

From the *Kansas City Med. Record*, February, 1885:—That eczema is curable, there is no doubt. Some cases yield readily to treatment, others more slowly, and others still are very stubborn. - But the proper appreciation of the exciting cause, and the perseverance in those medicines locally and constitutionally under which there is even moderate improvement, will bring good results. In other words, I would suggest that we be not too prone to change to something which *might* be better, as long as what is being used is accompanied by improvement. There is no form of eczema which is more distressing to the patient, or presents such an ugly appearance, as eczema rubrum or madidans. The itching, and even the pain (which latter is seldom complained of in the other varieties), the infiltration, thickening, and at times œdema and crusting—all tend to make this the most onerous to the subject. But happily no form yields so beautifully and rapidly to appropriate treatment, not only as to the appearance of the part but also as to the comforts of the patient, and in no form is internal medication so seldom indicated.

Eczema rubrum is not a variety of the disease, but rather a result of one or more of the primary lesions. It is a chronic condition, following either the papular, erythematous, vesicular, or pustular forms, but generally preceded by the last two lesions. Eczema rubrum may occur on any part of the body, but its favorite sites are the legs in those advanced in years, and on the face and scalp in infants. Not only is the skin affected, but if the disease has existed for some time the deeper structures become involved. It is ordinarily preceded, when on the legs, by the vesicular or erythematous varieties; and, when on the face or scalp, by the vesicular or pustular forms. If the vesicular variety predominates, there is copious weeping and excessive redness, with perhaps an oozing of blood. If the pustular eruption is in excess, then there is apt to be great crusting, thus hiding the subjacent tissue in which the disease is pursuing its course.

Eczema rubrum untreated does not tend to recovery; and especially is this true when it occurs upon the legs. But, properly managed, it is the most rapid of all forms of eczema to return to a healthy condition.

The diagnosis of this disease is almost unmistakable, though, when it occurs upon the face with considerable crusting and some ulceration, it might possibly be mistaken for syphilis.

Permit me to say that the success depends in a very great measure upon the physician's personal supervision of the case, and the strict observance of the instructions on the part of the patient. A half-way attention only results in no permanent relief.

I cannot consider all the medicines useful in the treatment of this disease, but will enumerate a few: The preparations of mercury, especially the ammoniate, mild chloride and red oxide glycerole of the subacetate of lead, diachylon ointment, oil of cade, caustic potash, boracic acid and salicylic acid. Very rarely eczema rubrum of the legs in the very aged may require, in addition to medicinal measures, absolute rest in the recumbent posture.

In conclusion, I will quote from Ferdinand Hebra, the father of modern dermatology, in regard to the treatment of eczema in general. He says: "Although my own observations have not yet enabled me to cure all cases of this disease, '*torto, cito et jucundo*,' yet I think I may without boasting, and with a good conscience assert of my own plan of treatment—that it will cure a great majority, will cause great alleviation in *all*, and will do harm in none."

## ECZEMA.

By HENRY J. REYNOLDS, M.D., Prof. of Dermatology, Coll. of Phys. and Surg. Chicago, Ill.

From the *Western Medical Reporter*:—Eczema occurs more frequently than any other disease of the skin, excepting perhaps acne, not less than 30 per cent. of all cases coming under this head. No disease of the skin assumes so many different forms. Each and all, however, have certain common characteristics that serve to distinguish the disease, regardless of the form, from other diseases of the skin.

Among the prominent symptoms of eczema are *itching and redness, exudation, crusting and scaling*, and infiltration.

The itching is, perhaps, the most universally prominent symptom of all, occurring without fail in all cases and probably in a more marked degree than in any other disease. Except in very chronic cases, redness is present always.

While we may not at all times during the course of a case have exudation, an investigation will almost uniformly reveal a history of moisture at some period of the disease.

As we have an increased determination of blood and nutritive material to the part so we have an increased proliferation of cell and tissue formation in the deeper parts of the skin and a shedding or scaling of the external or superficial portions. Another source of the scaling and crusting, especially the latter, is the drying up of pathological products or exuded material.

In severe cases, especially where there is much determination to, or stasis of blood in the part, as in the leg, we almost invariably have some infiltration or thickening.

But are we sure of our diagnosis yet? Many of these symptoms are common to other diseases of the skin. In some respects the case may resemble psoriasis. We exclude the latter by (1) an almost entire lack of subjective symptoms—itching, &c.—in that disease; (2) by complete absence of any history of moisture or exudation, the disease being dry from first to last; (3) by entire absence of infiltration and by a different character to the scales, they being white and shiny in psoriasis and leaving an angry red base which oozes fine points of blood when removed. Further, psoriasis differs from eczema in being a more or less symmetrical affection and preferring rather the extensor to the flexor surfaces, &c.

The idea of a syphilitic origin of the eruption may be excluded by an almost entire absence of *itching* in eruptions resulting from that cause, absence of general *redness*, &c; and further, by their being symmetrical or generalized eruptions, by their history of infection, chancre, involvement of the glands and mucous surfaces, &c.

The parasitic diseases may be excluded by their giving rise to less itching, by their history of contagion, by the different behavior of their eruption, &c., once in possession of a knowledge of which, as well as other differential points above referred to, a diagnosis may be made with great readiness, accuracy and positiveness.

As a general rule the treatment may be governed by the acuteness or chronicity of the symptoms; where there is much irritation, soothing measures are called for, and where there is a chronic atonic condition more stimulating measures are indicated. Remedies which tend to quiet itching are always indicated, and scratching the parts must be imperatively prohibited.

## FRECKLES.

Freckles, or lentigo, may sometimes be made to disappear by an application of citric acid night and morning. The method employed by dermatologists, and attended with considerable success, is to apply a solution of corrosive sublimate, one to three grains to the ounce of water, or emulsion of almonds night and morning. Dr. Duhring reports the latter as the most satisfactory, and advises its application until a slight amount of desquamation takes place.—*St. Louis Med. and Surg. Jour.*

# MIDWIFERY,

## AND THE DISEASES OF WOMEN AND CHILDREN.

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### ANÆSTHESIA IN LABOR.

By JOHN P. REYNOLDS, M.D., Prof. Obs., Harvard.

From the proceedings of the *Suffolk District Med. Soc.*—Dr. Reynolds said that such an employment of forceps was not in accordance with his opinions or with his habit. He would venture the remark that partisans have not infrequently based their preferences concerning version and forceps upon their entire list of cases. No valuable conclusions are reached if this be done. Under conditions wholly favorable version becomes delightfully easy,—its results most admirable. Quite as much can be urged in praise of the every-day applications of forceps. We approach the real question, when we place side by side the truly hazardous cases of difficult extraction following version and forceps deliveries, like those under consideration, where both the time required and the otherwise formidable character of the procedure put two lives in peril.

The fact that anæsthesia, when in operative obstetrics it is necessarily prolonged to deep unconsciousness, introduces an element of danger should not make us loath to acknowledge that in ordinary childbirth its rational use is an inestimable comfort. Thus employed it presents absolutely no drawback. The continued endurance of suffering induces more surely than all other causes combined exhaustion of nervous supply, consequent uterine relaxation, and the tendency to alarming loss of blood. To abolish this suffering with its many attendant risks is the one great service of anæsthetics. It is true that even moderate anæsthesia rarely fails to lengthen the duration of labor; but to a patient from whom the remedy has taken all the intelligent appreciation of time the added hour or half-hour is of no moment. Rare instances are observed in which ether does its very best work by making women who, under agonizing pain long continued have grown unmanageable, tractable and helpful. In an opposite, very small, minority of patients anæsthesia arrests uterine contraction. When this occurs the one indication for the remedy is gone. It cannot then safely be continued.

He who withholds from women in labor a blessing so great as this, who implies that the resort to it is unsafe and even dangerous, ought to be held to the most convincing proof of his assertions, at the peril of being arraigned as both selfish and cruel.

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### EXTERNAL USE OF CHLOROFORM IN LABOR.

From an editorial in the *Medical Age*, Jan. 10, 1885.—While death from the use of chloroform during labor is one of the rare occurrences, there are circumstances under which we might wish to avoid the employment of the anæsthetic after the ordinary method, while desiring at the same time to secure its effects.

In an article translated from the Swedish for the *Chicago Medical Journal and Examiner*. Dr. A. Svanberg gives a description, with illustrative cases, of a method of applying chloroform externally by means of which its local

action on the uterus may be secured without general anæsthesia. He applies the mixture of equal parts of chloroform and sweet oil, or chloroform two parts and sweet oil one part, over the uterus, by means of a flannel soaked in the mixture. As a means of allaying tonic spasm of the uterus and rigidity of the os he has found it to serve an excellent purpose. In hour-glass contraction with retention of the placenta, and when for any reason it is found necessary to introduce the hand into the uterus this method may, he says, be depended on. Since his first use of it in this manner, over seven years ago, he has not found it necessary to administer chloroform by inhalation, for rigid contraction of the uterus, and in several cases he has turned and delivered without suffering to the mother. In several cases he has found it necessary to repeat the application in five minutes.

While we should recommend a trial of this new method, we should admonish to caution against the irritant action of chloroform thus applied, and the danger of the mixture finding its way to the mucous membrane of the vulva and vagina, where it might cause a degree of pain which it would be desirable to avoid.

### THE VECTIS, AND MACROTIN.

By W. E. ROGERS, M.D., Roxford Flats, N. Y.

From the *Albany Med. Annals*.—I was instructed in the medical school never to take an instrument with me to the bedside of the patient. I have long since learned never to go there without one.

The vectis is my favorite instrument, and I seldom find it necessary to resort to the forceps. Many times when the pains were good, but when the head, though properly presenting, was not in just the position to glide along the oblique diameter of the pelvis easily, and the labor was thus retarded, I have, by slipping the vectis under that side of the head which was unduly pressing against the pelvis, lifted it into its proper place, and then, with a little traction, brought about the delivery speedily.

When the pains are inefficient and the os undilated and unyielding, I put five or six grains of *Macrotin* in half a teacupful of water, and give, every fifteen minutes, one or two teaspoonfuls. One of the first effects observed is a relaxation of the os and soft parts and an increased flow of mucus. The pains now soon improve, you slip in the little vectis, and when the uterus pushes, you pull, and in an incredibly short time the labor is accomplished *cito, tuto et jucunde*.

### DELIVERY OF THE HEAD IN THE SECOND STAGE OF LABOR.

By JAMES D. MCGAUGHEY, M.D., of Wallingford, Conn.

From the *Coll. and Clin. Record*, we clip the following resumé:—(1.) Both hands can be used. (2.) The function of the right hand is principally that of a sentry to watch over the perineum, the advance of the head and uterine force. (3.) It can, if necessary, be used to dilate the maternal passage, stretch the perineum, or be introduced into the rectum, when feasible, to hook up the chin. (4.) The fingers of the hand can be brought to bear at the fourchette to meet those of the left hand from above, to fortify and strengthen this thinned and weakened part. (5.) The right hand can be used to counteract too much pressure downward against the rectum, or can be used to fulfill the indications laid down by Playfair. (6.) The position of the patient and the position of the accoucheur enables him to watch the advance of the head and the action of the perineum under pain. (7.) The left hand fulfills those most important indications laid down by Barnes, Lusk, Goodell and others, to support the head. It has great power to repel or direct the fetal head. It protects the thinned edge of the perineum, the fourchette, the *external structural end* of the posterior curved surface of the parturient canal, and directs the head and shoulders from this point in the imaginary line, the curve of Carus, over the symphysis pubis, carrying out the external mechanism of labor perfectly. (8.) If laceration cannot be prevented, it can be limited in depth. (9.) While the left hand directs the

head, the right can look after the shoulders, (11.) The child's head having been born under the eye, the extent, externally, of laceration can be seen, and will give a correct idea of its actual depth. Sometimes mistakes are made as to actual depth and extent of perineal wounds, on account of the thorough relaxation and retraction of the perineum after the complete delivery of the child. (12.) In thinned and livid perineæ, where the utmost tension has been reached and laceration about to occur, the head can be repelled, and episiotomy can be easily performed, with the scissors in the right hand. (13.) With proper attention to details suited to each individual case, with perseverance and patience, it is my belief that more laceration can be prevented in the management of the second stage of labor by the method described, with its details, than by any other. There is one precaution to be observed. When the head is well engaged between the labia, and the pains are strong and forcible, and the chin is about to clear the perineum, the physician, in his eagerness to prevent a laceration, is apt, with the left hand placed in the position I have described, to exert too much force to keep the sub-occipital point hugging the under surface of the pubis, and might produce a laceration of the sub-urethral surface, or a solution of its continuity.—*Amer. Journal of Obstetrics.*

### IRREGULAR CONTRACTION OF THE UTERUS.

By E. S. M'KEE, M.D., Cincinnati, Ohio.

From the *Columbus Med. Jour.*, Dec., 1884.—The old time-honored term, "Hour-Glass Contraction," has been held in contempt by some of the brilliant ones of the later school. Hence I, to escape possible criticism, christen my article with the name it bears.

Irregular contraction of the uterus, of course, is a more general term and applies more exactly to a larger number of varieties, and bids fair yet to obtain the position of title to this accident. Yet there are undoubtedly irregular contractions of the uterus which might well be termed Hour-Glass Contraction.

Looking into the matter more closely, we find the following: *Varieties.*—A spasmodic contraction of (a) the os tincæ; (b) of its internal orifice; (c) of one or more portions of the body of the uterus; (d) of the whole body of the womb.

On account of the flaccidity of the cervix uteri, after the birth of the child, the presence of the contraction at the os tincæ is denied. It is also claimed that did this occur the contraction would be of short duration.

M. Gullimot says that the second variety is the true Hour-Glass Contraction.

As for the third variety, it is claimed that the uterus contracts accurately upon a body within its cavity, hence on the placenta. This variety may be partial or complete.

Stolz has written up the fourth variety, which is fully explained by the name given to it.

*Frequency.* Sixty-six cases of retention of the placenta, requiring the introduction of the hand, are reported by Collins as occurring in the Rotunda Hospital, in Dublin.

"In almost every instance this contraction took place where there was flooding. He scarcely ever introduced his hand into the uterus without meeting with it, whether the placenta had or had not been expelled."—*Burns.*

"In all my practice, consisting of upward of 1,200 cases, I have never met with a case resembling Hour-Glass Contraction. I have been called several times by my professional brethren when the placenta has been incarcerated in the uterus and the os closed."—*Robertson.*

"I never met with an Hour-Glass Contraction and think it very rare, or does not exist at all."—*Campbell.*

"Abnormal Adhesions and Hour-Glass Contractions are more frequently encountered in the experience of the young practitioner, and they diminish in frequency in direct ratio to increasing years."—*Braun.*

Although the post-partum Hour-Glass Contraction is so rare as to be entirely denied by some, the ante-partum variety is even much more rare.

*Etiology.* The use of the cord as a bell-rope or fishing line, with which to draw out the placenta. The introduction of the hands or instruments of the accoucheur may result in the same condition. Especially is this the fact if the hands or instruments be cold. Any other irritation of the uterine muscles may result in the same. From the data in our possession we are brought to the conclusion that a disproportion between the presenting part of the child and the pelvis of the mother must be a cause. Among the other causes we have sudden emptying of the uterus, as in precipitate labor; after tedious labor, the uterus being exhausted and incapable of regular contraction; subsequent to the improper use of ergot; after the birth of twins, or where there was present a large amount of liquor amnii, or great distension of the uterus; premature evacuation of the liquor amnii.

*Diagnosis.* The placenta not coming down as it should after the delivery of the child, if traction on the cord is employed it is found that it does not descend, but instead it lengthens from elasticity, immediately retracting on release. This shows that it is attached above. Should the examiner pass his hand along the cord he will, in the true hour-glass contraction, find the external os patulous and flaccid, often distorted, readily admitting the finger up to the internal os. Here he meets an obstruction complete or nearly so to further progress. One finds a large or small portion of the placenta below the constriction, or it can be felt by the finger-tip above the stricture. Internally one finds those parts of the uterus above the constriction hard and firm. This can also be felt externally, and the constricting band can in many instances be made out. The uterus is found high up in the pelvic cavity and elongated with its transverse diameter diminished.

The writer would urge upon the profession the importance of abdominal palpation as an additional means of diagnosis. An expert diagnostician should be able to make out the presence of hour-glass contraction through the abdominal walls.

*Prognosis.* In this statistics do not come much to our aid, and we do not know a great deal concerning it.

*Treatment.* Remove, first, the spasmodic contraction, then remove the placenta if retained. Time alone will sometimes remove the constriction, though it may permit of its increase. There being no contraindicating implications as hemorrhage or lapse of time, one may quietly wait. Six or eight hours having passed by it is better to commence active measures. One may try to dilate the constricted orifice by inserting two fingers, and by firm, steady, and continued, yet slight force, overcome the spasm, or, as it were, wear it out. As a preparatory measure, the fingers should be smeared with unguentum belladonnæ. King asserts that it is not affected by anesthetics. Opiates, decoctions of belladonna and hyoscyamus are recommended. Frankel recommends subcutaneous injection of morphia muriate, 0.015 0.003 gram.; atropiæ sulph., 1 milligram. Dr. Richardson recommends amyl nitrite, gtt. iij., ether 3 j.; inhale. Dr. Fancourt Barnes recommends inhalations of three drops of nitrite of amyl on a handkerchief. Johnson has had excellent results with hypodermic injections of belladonna. Warm fomentations and irritations to the abdomen, sinapisms, turpentine stupes to hypogastric region, venesection when patient is plethoric, and warm baths. In the ante-partal variety, the upright position has been found to be favorable to delivery. Ramsbotham objects to large doses of opium. They may, he says, so paralyze the uterus that it will not again contract. Warm baths might produce hemorrhage, which might not be easily detected.

If a small portion of the placenta is found to be below the constriction, it should be pushed up and the hand made to penetrate into the uterine cavity. If strangulated near the middle, one should pass the hand up and secure the part above. If the major portion is below the constriction this should be compressed, thus lessening that above and favoring delivery. Do not, however, be too eager to remove every bit. The danger of allowing a portion of the placenta to remain are great; those of forcible detachment are greater. When it is difficult to induce the dilatation of the stricture, M. Dubroca, of

Bordeaux, introduces one finger into the placenta, tearing it up and reducing it to fragments, which are afterward expelled. He has found this plan useful in cases in which he could not introduce the hand. One may inject cold water into the placenta, through the umbilical vein, with considerable force. This should be retained a few minutes by compressing the cord, then released, and the injection repeated. This has an effect both on the placenta and the uterus. If everything else fails, incisions through the stricture should be made. Care should be taken that the cut is made sufficiently deep. It should be made with the long blunt fistula shears. The following rules are given as to prophylactics: (A.) Avoid every cause liable to irritate the uterus. (B.) When ante-partal, avoid a too early rupture of the membranes. (C.) As far as possible remove all impediments to the expulsion of the child from the uterus. (D.) Assist with the forceps or by turning before the cervix becomes excessive.

#### LABOR IN A GIRL AGED ELEVEN YEARS AND NINE MONTHS.

February 2, 1882, Dr. T. H. Stallcup delivered a girl only eleven years and nine months old of a child that was asphyxiated when born, but was revived by the use of tepid bath, blowing in the mouth, etc. The child, a girl, weighed a little less than seven pounds. She only lived a few hours. There was a bruise upon the side of the head and face which it was claimed was caused by the mother's slipping off a gallery which was frozen over, and striking her side upon the ends of the planks. The young mother recovered. Dr. Stallcup reported the case at the 1884 meeting of the Texas State Medical Society.—*Weekly Med. Review*, Jan. 10, 1885.

#### THE INFLUENCE OF AGE ON PRIMIPAROUS LABOR.

KLEINWACHTER, in the *Practitioner* from *Zeitschrift f. Geburt. u. Gynak.* gives conclusions derived from the records of his clinic at Innsbruck. He divides into three groups the 920 cases of primiparæ which have been attended there. In the period from 16 to 19 years of age there were 111 cases; 20 to 29 years of age, 694 cases; 30 to 41 years, 115 cases. He names these groups respectively the young, the middle-aged and the old. He concludes:

1. That accidental complications which have nothing to do with pregnancy occur least often in the young group, most frequently in the old.
2. That ailments attributable to pregnancy are observed most frequently in the old and next most frequently in the young.
3. That hemorrhages in the course of pregnancy occur most frequently in the young and least frequently in the old.
4. That the duration of labor is most frequently abnormally protracted in the old, and next in the young.
5. That inefficient pains abnormally protracting labor are least frequently met with during the period of middle-age, most frequently in the old.
6. That, therefore, forceps must be used most frequently among the old, most seldom among the middle-aged.
7. That the lengthening of the labor of primiparæ with the increase of age occurs chiefly in the first stage; the second stage is scarcely affected by differences of age; the third stage is not at all affected.
8. That the percentage of mortality after forceps operations on primiparæ rises parallel with the increase in age.
9. That the older the primiparæ the greater is the danger of perineal laceration.
10. That the older the primiparæ the more likely a post-partum hemorrhage, although the frequency of hemorrhage is by no means so great as hitherto supposed.
11. That the disposition to affections of the kidneys increases with age in primiparæ.
12. That the frequency of edema without kidney disease also increases with the age.

13. That the older the primiparæ the less is the danger of mastitis and the less probability of her being able to suckle her infant.

14. That the old most frequently and the middle-aged least frequently sicken and die of puerperal fever or have puerperal mania.

15. That the morbidity and mortality per cent. is highest in the old, and lowest in the middle-aged.

16. That spontaneous premature labor occurs very frequently in old primiparæ and least often in the middle-aged.

17. That the frequency of abnormal positions of the fetus increases with the age of the primiparæ.

18. That the older the primipara is, the more likely is she to bear a boy, except those from 20 to 21 years of age, who bear more girls than boys.

19. That analogous to the discovery made by Hecker and confirmed by Wernich, viz., that first-born children are heavier and longer the older the mothers are, is the fact that the umbilical cord of the first-born of old mothers falls off the earliest, and that of the first-born of the youngest mothers the latest.

20. That the liability to twin pregnancy in primiparæ increases with the age.

21. That with increase of age in primiparæ the frequency of bearing deformed children diminishes.

22. That the mortality per cent. of first-born children increases with the mother's age; among the oldest primiparæ the fetal mortality reaches a not inconsiderable height. — *Weekly Med. Review*, Jan. 10, 1885.

### INDUCTION OF PREMATURE LABOR.

By T. GAILLARD THOMAS, M.D., Prof. of Gynecology, Coll. Phys. and Surg., New York.

From a lecture published in the *Med. and Surg. Reporter*, Feb. 14, 1885, we abstract the following:—*The method of inducing premature labor* which I now invariably adopt is very simple, and, at the same time, a perfectly efficient one. The patient is placed across the bed, with the buttocks resting near the edge, and under her is arranged a large piece of rubber or oil-cloth in such a way as to drain into a tub below on the floor. In this tub we put one or two gallons of water of a temperature of 98° F. The operator stands between the thighs of the patient, whose knees should be properly supported and employing a syringe with a long nozzle, which is carried up as far into the cervical canal as it will go, he keeps a steady stream directly against the membranes. In the course of ten minutes the os will be the size of a silver half dollar, and when dilatation to this extent has been accomplished, he is to insert a gum catheter between the membranes and the uterine walls. The patient is then put in bed, and that is all.

This operation constitutes one of the greatest advances that have ever been made in the obstetric art, and it is certainly no mean triumph to be able thus to preserve a human life which, without its aid, would have been inevitably lost. I can point to at least two dozen children in this city, who by this means were saved from an untimely fate. When the infant has been delivered before full term, it should not be washed and otherwise treated in the ordinary manner of nurses, but should be carefully wrapped in warm cotton and allowed to remain in it; the temperature of the room in the meanwhile being brought up to nearly one hundred degrees.

### PREMATURE LABOR.

By AUGUSTUS P. CLARKE, M.D., Cambridge, Mass.

From the proceedings of the Cambridge Soc. for Med. Improvement (*Jour. Amer. Med. Ass'n.*, Jan. 24, 1883.)—Dr. Clark reports two cases and writes as follows concerning the methods of performing the operation.—The plan of inducing premature labor by the introduction of a flexible gum elastic bougie, is evidently a safe and easy method. My experience in the use of sponge tents, even when thoroughly carbolized, for dilating the cervix for any pur-



pose whatever, is unsafe and often leads to irreparable mischief. For a long time I have abandoned their use altogether. The use of a flexible gum elastic bougie is more scientific. The bougie is cleanly, its presence in the uterine cavity, across the fundus, after a few hours, will often excite healthy and normal uterine contractions. In any case where any unpleasant or any constitutional disturbances arise from its presence, it can be readily removed by the attendant, or the patient herself, before alarming or serious symptoms supervene. The bougie is also applicable in cases in which it is desirable to induce abortion for the relief of obstinate vomiting of pregnancy, that sometimes threatens the life of the patient. I have used it for such a purpose and have found it a most valuable means of emptying the uterus of its contents. Digital dilatation, when carefully and judiciously practiced, is also a most valuable means in any case where the emptying of the uterus is urgently and speedily demanded.

An important consideration in a case where the induction of premature labor is required, is to ascertain when the time has arrived beyond which pregnancy should not continue. This can only be decided by careful consideration of the whole history of the case. From my experience in the above cases, as well as from my general obstetric practice, I would state that in no case should the induction of premature labor be undertaken until after a most thorough study or knowledge has been gained of a previous pregnancy, or pregnancies, for it is absolutely impossible to obtain any definite and reliable knowledge relative to the dimensions of the pelvis until after labor is well advanced or immediately after it has been completed.

#### THE MANAGEMENT OF LABOR.

By EDWARD R. STONE, M.D., Philadelphia.

From a paper read before the *Philadelphia Clinical Society* and published in the *Medical Times*, Jan. 24, 1885.—In the first stage of labor, the ordinary difficulty in primiparæ at least, is from a lack of the proper dilatability of the cervix, the degree of rigidity varying from a mere temporary retardation of labor to those difficult cases which are only overcome by mechanical dilatation. In my cases, which show a rather large percentage of primiparæ (thirty per cent.), there were several requiring assistance, but none of a serious character. At first careful and systematic trial was made of the warm-water douche, but the results were disappointing, as it only washed away the secretions which nature throws out to lubricate the parts, and had no marked effect in relaxing the os. Chloral given in fifteen-grain doses until three or four doses were taken had, however, a most happy effect, especially where the rigidity was associated with marked suffering in an over-sensitive cervix. In two cases, after the ordinary means had failed and the patient's nervous system was suffering from protracted anguish, a full dose of morphia hypodermically caused a temporary cessation of labor, which, after a refreshing sleep, was resumed and successfully terminated. In four cases, however, laceration of the cervix occurred sufficient to cause the usual symptoms subsequently. There may have been others, but these were all which were brought to my notice. Examination of some of these cases of imperfect dilatation has led me to believe that the maximum limit of normal expansion of the os may be insufficient to allow the head to pass, when a laceration is unavoidable, just as the vulvar orifice may be too small to give exit to the head without injury.

The proper management of the perineum occupies the anxious care of all obstetricians, and it seems that, even with the best known methods, we have yet much to learn. It is well that the old plan of pressure with a folded napkin is about obsolete, as it was erroneous in theory, and useless, if not harmful, in practice. The method of Professor Goodell accomplishes perhaps better than any other the three indications—viz., to retard delivery, to assist extension, and, by drawing forward the perineum, prevent it from suddenly slipping back over the brow. It is, however, open to the objection that in some cases the fingers in the rectum increase the tenesmic efforts and compel the patient to bear down more than is proper and safe. After having

had a patient draw suddenly away from my hand at a critical period, I have, in some cases, adopted Dr. Jas. D. McGaughey's plan of assisting extension and retarding delivery with the left hand passed between the woman's thighs from above. This can be done by having the patient on the usual left side near the edge of the bed, with the thighs separated, while the physician sits behind the patient, facing the foot of the bed. It has seemed to me that, in this way, the advancing head can be easier controlled, and the arm across the woman prevents any sudden and hazardous movements. The right hand is free to draw forward the perineum or to reinforce it any other way.

There is still diversity of opinion as to what constitutes a laceration calling for the use of sutures, physicians of considerable experience stating that they never had a case requiring any other treatment than bandaging the knees together, while others often find use for sutures. The only safe rule is to make a careful examination of the parts, and if the muscular tissues and central tendon of the perineum are divided it is useless in my opinion, to look for primary union unless the wound is firmly united. The legs may be tied, but the retraction of the transverse perineal muscles will cause the wound to gape.

The proper treatment of the third stage is of the greatest importance, but the history of the subject, unfortunately, teaches that the most diverse plans from rude and forcible delivery to an expectant plan carried to an almost ridiculous extent, have had their advocates in high places. Not many years ago the teaching was to wait a half-hour, and gently assist nature by drawing on the cord; then came Cr  d  , with his many disciples of expression, and for several years this method has been the most popular. Quite lately, however, the pendulum of medical opinion has shown signs of swinging back again to less active means. Several have expressed themselves as being dissatisfied with Cr  d  's plan, because it empties the womb too speedily and is apt to leave behind the membranes to become a source of danger from hemorrhage and septic  mia. These either place themselves in an attitude of "armed neutrality" and wait for nature to accomplish the object, or adopt an intermediate plan which has received the name and sanction of the Dublin school. The latter is described as following down the uterus with the hand as a sentinel and guard, and, as soon as uterine contractions are pronounced, assisting by firmer pressure.

Professor Stadtfelt, of Copenhagen, presented to the late International Congress the results of respective methods in a large number of cases. His conclusions were that Cr  d  's method is preferable to the expectant. Detachment and retention of membranes occurred somewhat more frequently after expression, but he thought that the objectors to it attached too much importance to the objections, and overlooked the fact that it removed dangers attendant on the time of waiting in the expectant plan. The cases treated by Cr  d  's method also showed a less per cent. of mortality and puerperal disease than did those treated expectantly. All will admit that the patient is not safe until the placenta is expelled, which is sufficient ground for its speedy removal, if that can be accomplished safely. In the majority of cases the placenta will be found to be wholly detached very soon after, if not simultaneously with, the expulsion of the f  etus, and can no longer serve any useful purpose, except to provoke uterine contractions to expel it. If the uterus has been followed down with the hand, there does not seem to be any good reason for not removing it as soon as the contractions are resumed and the blood in the uterine sinuses has had time to coagulate.

It has been my custom to keep the hand upon the uterus from the time of delivery of the shoulders until the third stage is completed, and for several minutes after, and as soon as a firm contraction is felt to remove the placenta by pressing and compressing the uterus with the left hand, while two fingers of the right hand are hooked into the edge of the after-birth which is usually protruding from the os, making traction and twisting up the membranes as soon as the placenta is brought outside of the vulva. Thus the left hand is assisted in the extraction, and the membranes are not liable to become detached, as sometimes happens with unassisted expression. I have been in the habit of administering a full dose of ergot as the head is emerging,

in all cases other than primiparæ. This practice is condemned by Lusk, Playfair, and others, on the ground that the contractions produced by the drug may imprison the placenta and lead to difficulty in its removal. This objection no doubt applies to those cases in which ergot is administered and the expectant plan pursued, but not if the after-birth is removed as soon as the pains are re-established. Those who object to giving ergot before the completion of the third stage should be prepared to administer it hypodermically if symptoms of inertia come on.

### THE THIRD STAGE OF LABOR.—OBSTETRIC HINTS.

By J. SAVAGE DELAVAN, M.D., Albany, N. Y.

From the *N. Y. Med. Times*, Feb., 1885.—As soon as the child is in the world, I place my hand on the abdomen of the mother, grasping, gently but firmly, the contracting uterus, only relinquishing my grasp on finding contraction taking place. Then I request the nurse to place her hand where mine has been, directing her how to apply it. I then sever the funis between two ligatures, and again relieving the nurse, continue, gently, the kneading process. If this is properly done, in a short time the uterus will be found firmly contracted. I then discontinue my manipulation, not following entirely the method of Cr  d  , by keeping up the kneading until the placenta is expelled from the vulva; but finding the uterus contracted, I introduce my right hand into the vagina and find the placenta, which I carefully and slowly withdraw, winding and turning it in my hand, so that the membranes are twisted into a rope and come away intact. Before disposing of the mass it should be carefully examined to see that no portion is retained. I then seat myself by the bed, and with the left hand keep up gentle but firm pressure with manipulation for at least half an hour, at the end of which time I sweep the vagina with my right fore-finger, to clear it of clots and to see that no portion or shred of membrane remains either in the canal or the uterine mouth. Finding the womb hard and firmly contracted, I then, and not till then, apply the binder, folding a napkin saturated with spirits and placing it over the uterus under the bandage. When the binder is applied, I have the soiled clothing removed, place the patient in a comfortable position, the head not too high, and then—what? Go home? No. I wait religiously another half hour. Then, if the pulse is normal, as it should be, and the napkin which has been placed at the vulva after the bandage is applied shows that there is no hemorrhage, I leave my patient, instructing the nurse to put the child to the breast as soon as the mother is rested, and order some light nourishment to be administered in an hour.

The hour spent at the bedside after the birth of the child will save many a sudden summons, many an anxious moment. There is always danger to the parturient woman until the emptied uterus is firmly and permanently contracted, and the physician who leaves the patient immediately after the delivery of the secundines, and trusts to nature to accomplish the rest, fails in his duty, and will, sooner or later, bitterly repent his negligence. Remember this: "*No one has a right, with our present knowledge, to lose a life from hemorrhage from the uterus, immediately after confinement,*" and if the means I have described are taken, post-partum loss of blood will be of rare occurrence.

### ABORTION.

Dr. Edward Warren Sawyer, Chicago Gyn  cological Society (*N. Y. Medical Journal*, December 6, 1884,) says:—As to the treatment of abortion, the two distinct courses—the radical method of evacuating the uterus immediately, and the plan of waiting patiently—had each in turn been advocated and opposed. He himself had followed the expectant method; he had waited as long as a week for nature to complete the expulsion of the ovum, and he had never seen any untoward consequences from it. He enjoined absolute rest in the horizontal posture, and gave quinine and alcohol as they were required. Apart from the vaginal tampon, he used no local treatment further than vaginal injections of liquor sod   chlorinat  . He objected to the removal of the whole or any part of the product of con-

ception from the uterus, because: (1) it was painful, involved the use of an anæsthetic, and predisposed to hæmorrhage from uterine inertia; (2) an assistant was necessary; (3) the amount of unavoidable injury to the genital tract was considerable.

Dr. W. W. Jaggard said:—In regard to the treatment of inevitable abortion, when the ovum was expelled in an intact or mutilated condition, and the decidua or portions of the foetal membranes remained within the uterine cavity, it was necessary to regard the natural history of the condition, which had been appropriately termed by Breslau "incomplete abortion." Its terminations were, briefly, as follows: (1.) Spontaneous elimination of the retained portions, as the result of retrograde metamorphoses, accompanied by intermittent hæmorrhages and uterine contractions. (2.) Sometimes, although seldom, the hæmorrhage ceased entirely and the patient was apparently well, but, after an interval varying from a few days to weeks or months, pain and hæmorrhage suddenly came on, and the mass was expelled. This retention, with a long interval of rest, was noticed when the placental or decidual attachments were intact. (3.) More frequently the retained decidua or placenta underwent suppurative or ichorous changes, and there was danger of systemic infection, in spite of the thrombosis of the uterine sinuses and the proliferative change in the uterine mucosa. (4.) The retained mass became converted into placental or fibrinous polypi, always requiring operative interference.

Each of these four terminations involved danger to the mother. Their natural history (for the elucidation of which Spiegelberg was entitled to special recognition) made in favor of the so-called radical treatment, evacuation of the uterus at the earliest possible period. The plan recommended by Dr. Mundé, in the *American Journal of Obstetrics* for February, 1883, was worthy of high commendation. The use of one finger within the uterus and one hand placed over the fundus was preferable to that of instruments when it was equally effective. The subsequent treatment was of extreme importance. Whenever the cavity of the uterus was invaded by the finger, or any instrument, it should be irrigated with some antiseptic solution.

Dr. William H. Byford said that the treatment must be governed by a consideration of the individual case. In any case, the patient must be carefully watched. He had never seen the hæmorrhage of abortion prove immediately fatal; the acute anæmia, however, might induce a condition that would render the woman more susceptible to sepsis or any intercurrent disease. He feared sepsis and metro-peritonitis more than hæmorrhage. He was conservative as to operative interference, and would let Nature do what she could, interfering only in case of her failure. The finger was preferable to any instrument, and it was not necessary to insist upon the removal of the placenta or the membranes with mathematical accuracy; if the placenta was grasped by an irregularly contracted uterus, the free portion might be cut off, and the rest allowed to remain. If two-thirds of the placenta were removed, and the uterus was well contracted, the patient was to be considered in a safe condition. In the event of sepsis, the whole intra-uterine mass should be removed.

Dr. John Bartlett said:—When abortion was inevitable, two conditions were requisite to justify interference. (1.) Dilatation of the canal of the cervix to the extent necessary for the passage of two fingers. (2.) More or less complete separation of the decidua from the uterine surface. Until these conditions were present, the vagina ought to be tamponed. He had seen two cases of retention of the placenta—for three months in one and four months in the other—without symptoms.

#### MISSED ABORTION.

By T. JOHNSON ALLOWAY, M.D., L.R.C.S. & P., Edin., Consulting Phys. Montreal Dispensary.

From the *Canada Med. and Surg. Jour.*, Dec., 1884:—By missed abortion is understood an arrest of pregnancy in the early months of gestation. Abortion is threatened. The fœtus dies, but is not expelled as is usual in cases of abortion. Milk sometimes appears in the breasts. Hæmorrhage may occur from

the uterus, or may not. If the ovuline membranes remain entire, the process undergone by the uterine contents is generally that of *mummification*—a peculiar form of decomposition—but *not putrefaction*. In such cases we will observe that the woman, as she advances in the apparent condition of pregnancy, gradually gets smaller instead of larger. She may or may not have a dark, non-offensive, muddy discharge, which may be constant or intermittent in character. Her general health is not as good as usual. There is a heavy, dead weight feeling in the pelvic region, and at last expulsion of the uterine contents takes place unexpectedly. This expulsion occurs usually, though not invariably, before the expected full term of pregnancy would have been reached. The mass expelled represents the nearly dried, shrivelled foetus rolled up in the membranes and placenta. It is of a dirty brown color, firm in consistence, and is in the so-called state of mummification.

This mummified condition has often been observed in cases where death of foetus has been due to a process of gradual inanition from inadequate blood supply; as, for instance, in the case of torsion or constriction of the umbilical cord. We are sure that it is not a putrid change—no atmospheric air has come in contact with it; it is non-septic and harmless. When a mummified foetus has been subjected to much intra-uterine compression, the term "*Papypyracious*" is applied to it. Another form of decomposition which the dead foetus in utero will undergo is known by the term *Maceration*. Here a granular degeneration and dissolution of the anatomical elements are everywhere evident. A foetus of one or two months may become completely dissolved away, nothing whatever remaining. Instead, however, of a process of *desiccation*, as in mummification, we have here one of *increase of moisture*, or true *post-mortem* oedema and hydrops. In reference to embryos which dissolve in the ovum-sac *outside of the uterus* in a few hours, I would say that the fact bears no relation whatever to the subject of missed abortion. That the condition is simply the result of putrid decomposition attacking an embryo which had just ended its physiological state, and was suspended in an albuminous fluid exposed to atmospheric air.

A condition allied to missed abortion, but differing from it in some respects, is one called *Missed Labor*. It resembles it because there is an arrest of pregnancy (death of the foetus). But instead of this arrest occurring in the early months, it occurs at, or close to, the normal time of expected delivery. The uterus makes an effort at expelling its contents, but fails.

Another condition remotely allied to the subject is that of *PROTRACTED PREGNANCY*, by which we mean pregnancy, *without* interruption, is carried beyond the normal period of gestation. Many authorities do not believe in the existence of such a condition.

As regards the etiology of this strange obstetric condition, it can be summed up in the following:—Syphilis, nervous shock of any kind, direct injury, twin pregnancies, endometritis, metritis, fevers, etc.

After referring briefly to several published cases, the author of the paper says:—To make the subject fairly complete, I should say a few words about the best procedure to follow in the treatment of missed abortion. Generally speaking, we should abstain from interference until one of two accidents take place—*severe hemorrhage* or symptoms of *septic infection*. In the case of severe hemorrhage, we should wait long enough only to allow the patient to recover reaction from the loss of blood under the well applied vaginal tampon. Then clean out the uterus thoroughly, if sufficiently dilated; if not, insert a tupelo tent for two or three hours and then operate.

The cases where sudden chills and elevations of temperature set in, with rapid pulse, every moment's delay is so much loss to the patient's chances of recovery and to our reputation. Pass in as large a tupelo tent as possible, remove it in a few hours, and thoroughly curette the uterus with the dull curette until every vestige of decomposed decidua has been removed. Then wash out the uterus with at least a quart of warm sublimate solution (1-2000), using a fountain syringe and tube having a return-stream. In regard to this procedure, the adage, "The man who hesitates is lost," was never more aptly applied than in this instance.

### AN IMPORTANT POINT IN THE PREVENTION OF PELVIC INFLAMMATION AFTER DELIVERY.

By R. B. MAURY, M.D., Memphis, Tenn.

From the *Miss. Valley Med. Monthly*, Dec. 10, 1884:—The fevers which follow delivery are symptomatic of peri-uterine inflammations. To this law there are some exceptions. On the third day, when the breasts are very large and the tension great, from over-fullness of the mammary glands, there are headache, backache and slight febrile disturbance, which, with propriety, has been called "milk fever." This is, however, a very unusual occurrence if the child has been put to the breast early.

The puerperal woman may also be attacked by any of the acute infectious diseases; or she may, have intermittent, bilious remittent, or simple continued fever.

A distinguished writer has described what he calls malarial puerperal fever, but I doubt the propriety of such a term, or the existence of such a disease. The malarial diseases occurring during the lying in period do not differ materially from the same diseases in a woman who has not been confined. I will here describe a situation in which I have more than once been misled, and probably others have had a similar experience:

A lady who, for a year or two, had been suffering from malarial outbreaks, was confined, under my care. The labor was the easiest and most satisfactory imaginable, but on the third day she had a chill. The fever which followed was not accompanied by pain or other symptom of pelvic inflammation, and, under treatment by quinine, terminated on the fifth day. Inasmuch as a physical exploration of the pelvis revealed no evidences of exudation, and but little tenderness near the uterus, I concluded that the attack was malarial; in other words, that it was the ordinary bilious-remittent, a typical chart of which I have elsewhere published. After a few days, however, the fever returned, and on the twelfth or fourteenth day of her confinement it became evident that exudation was taking place in the cellular tissue of the left broad ligament. This cellulitis was circumscribed, and was accompanied by but little pain or discomfort. In connection with it was discovered a very moderate laceration of the left side of the cervix.

I now return to my proposition that the fevers of the lying-in woman are, with the fewest exceptions, due to inflammation of the peri-uterine structures. The puerperal pelvic inflammations are traceable to two principal causes:—(1) A catarrhal endometritis, which, having its origin in some imprudence or exposure soon after labor, or else to disease existing prior to conception, travels from the endometrium along the tubes to the peritoneum. (2) In by far the largest number of cases they are due to the lacerations of the cervix uteri.

My object in writing this paper is two-fold:—(1) To urge the importance of looking carefully for lacerations of the cervix in every case in which we are justified in inferring their occurrence. I would strive to avoid everything like meddling midwifery, but at the same time would consider it my duty to search for lacerations in certain cases, and I would suspect them (a) in every rapid or precipitate labor; (b) in cases of breech delivery, when the head has been forcibly dragged through an undilated os; (c) in those cases where the forceps had to be introduced through a rigid and undilated os, after the waters had drained away; or where version became necessary under the same circumstances.

(2) My second object is to urge the importance of suturing immediately all lacerations of the cervix of any considerable size, even when there is no serious hemorrhage, because this is proper surgical treatment, and because it is the most certain and efficient means for the prevention of pelvic inflammation. It is simply doing what every surgeon would do if such a wound were brought to his knowledge in any accessible portion of the body. The torn surfaces should be cleansed, the edges carefully coapted, and secured by sutures. To use the language of Van Buren, "When we have secured complete primary adhesion in a recent wound, as a rule, all danger from inflammation is at an end."

A few words concerning the operation:—(1) Its performance may, as in the case reported, be deferred until the next day—the labor having terminated in the night. (2) It is very easily performed without ether, and without drawing the cervix down to the vulva; though this might be done as suggested by Shroeder, if the immediate operation were necessitated by hemorrhage. (3) Although involution takes place, and the tissues shrink, and the sutures become loose, the union is not hindered here any more than in the perineum. (4) The sutures, if of silver wire, may be left for a month, if it be thought desirable.

### QUININE IN THE MALARIA OF PREGNANCY.

By J. H. GODDARD, M.D., Sedgwick, Kan.

From the *Medical Index*, Dec., 1884:—We have here two cases of so-called child-bed fever, the cause of both undoubtedly being miasmatic. Dr. Fordyce Barker reports a case very much like the above, which he calls miasmatic child-bed fever. What is the cause of the Amaurosis in case number two, was it malarial, also? Dr. Gross says there may be a thousand causes for Amaurosis. We know that any derangement of the generative organs may cause a weakness of the eyes and dimness of vision through the effect of the sympathetic system secondarily upon the brain.

What was the effect of the quinia sulph. upon case number two, did its persistent use cause the abortion? I think not. Though the recent investigations of Goth of Klaussemburg, he finds that: 1st. Pregnancy gives no immunity from malarial infection; 2d. Malaria predisposes to abortion, and especially to premature labor; it causes premature labor (a) by the death of the fœtus; produced either by the high temperature of the mother, or by the direct action of the infecting principle on the fœtal organism; (b) by bringing on uterine contractions. Mr. Runge having demonstrated experimentally that "an elevation of the temperature to 40° Centigrade [104° F.] causes uterine contractions."

I will say that I have never hesitated to give quinia sulph. to pregnant women, and I have never had any bad results, unless case No. 2 can be so considered.

### VOMITING IN PREGNANCY.

By W. GILL WYLLIE, M.D., Prof. of Gynecology in the N. Y. Polyclinic, and Gynecologist to Bell, Hosp., New York.

From the *Medical Record*, Dec. 6, 1885:—Many women do not have nausea with pregnancy, and the absence of that symptom indicates a healthy cervix. Its presence, I believe, nearly always indicates either local disease or an abnormal state, the result of disease or imperfect development.

In looking over the literature, it is surprising how little has been done in the way of local treatment, and how much women have been dosed with almost every kind of drug for it. To-day, in our best text-books on obstetrics it is not treated as a symptom indicating disease, but merely as one of the symptoms of pregnancy, and local treatment may be referred to, but it is not advised. No one denies how serious it often is, and that now and then it causes death.

For two years past I have not seen a single case of this distressing condition that did not yield in a few days to local treatment, while several of my cases were not helped by the usual remedies.

The danger of inducing an abortion by treatment is by no means as great as I at first supposed it would be, and I think that with reasonable care many more cases of abortion and premature birth could be obviated than would be caused by the treatment.

For the relief of nausea, I have found dilatation of the canal for three-fifths of an inch to be, so far, perfectly successful in relieving this symptom, and in softening the hardened condition of the cervix so commonly associated with it, and perhaps causing the vomiting. Sometimes the index finger introduced to the first joint will answer, but in many cases, especially in

primiparae, it is very difficult to get even the point of the finger into the cervix. I now use a modified uterine dilator bent nearly at right angles, so that not more than three-fifths of an inch can enter the canal. In some cases there will be slight hemorrhage after even moderate dilatation, and usually one dilatation completely relieves all vomiting. After dilatation, the neck soon becomes shorter and much softer.

If not successful in correcting any trouble of the cervix, and there is any discharge, vaginal injections are to be used, and for some days before labor is expected antiseptic injections are used once a day.

If there is a doubt about the amount of dilatation, the best test is to put the patient upon her back, and when the index finger, up to the first joint, can be easily passed into the cervix, the dilatation is sufficient. Before resorting to abortion in any case where dilatation up to the os internum failed, I would first dilate the os internum and wait long enough to see if it would stop the vomiting, for this can be done in some cases without abortion necessarily following.

*Conclusions.*—1. That nausea and vomiting, or morning sickness in pregnancy, should not be considered and treated as merely one of the symptoms of pregnancy, but, as a rule, as indicating an abnormal condition of the tissues of the cervix uteri, due to imperfect development, disease, or the effect of disease on the tissues of the cervix.

2. That any pathological state which interferes with the softening and other changes which the cervix undergoes during pregnancy, may cause nauseal vomiting.

3. That in most cases relief is obtained by freely dilating the cervix uteri below the os internum, and in many instances it is the only means by which relief can be had. It is true that inducing abortion will give relief, but to accomplish this the cervix must be dilated.

4. That in many cases specific medicines given by the mouth are useless, and, as a rule, should not be used until a local examination is made and the indications for local treatment ascertained.

#### THE OBSTINATE VOMITING OF PREGNANCY.

From an editorial in the *Medical News*, Jan. 24, 1885.—The vomiting of pregnancy, although a common affection, has proved as unsatisfactory in theories as in therapeutics. It was formerly called sympathetic, and is now generally known as reflex—we have changed the name, but we have not thus added to our knowledge.

A somewhat curious fact which has been reported at different times, and to which our attention has recently been recalled by a Delaware physician who gives an instance under his own observation, is that the husband as well as the wife may suffer from the so-called morning sickness. This sickness simply results from a mental impression.

While the nausea and vomiting of pregnancy prove in the great majority of cases an indisposition rather than a disease, disappearing about the fourth month—in others, obstinate vomiting may result in death. The distressing character of the vomiting and the possibility of a fatal result being present in each case, lead us to turn with interest to a paper recently read by Dr. Graily Hewitt before the London Obstetrical Society upon the subject, and the discussion which followed, which may be found in the current London weeklies.

Dr. Hewitt brings physical views to explain the obstinate, uncontrollable, or incoercible vomiting of pregnancy. His explanation of the disease is that it results from interference with the normal expansion and growth of the gravid uterus. This interference may arise from incarceration in the bony pelvis of the uterus with version or flexion, or from rigidity and undue hardness of the os and cervix; the former he considers the more important factor.

Of the nine gentlemen participating in the discussion, not one sustained Dr. Hewitt's views in full, and, indeed, only one or two gave them even a partial support. Two of the gentlemen, Drs. Hicks and Bantock, stated



that they had never seen uncontrollable vomiting, while, on the other hand, Dr. Matthews Duncan, whose line of thought rarely coincides with that of other men, or who at least sometimes deals in verbal contradictions, stated that "he knew no controllable vomiting of pregnancy." This statement seems to illustrate what Lord Bacon called "an unsteady use of words," confusing the reader.

Dr. Barnes held that the vomiting of pregnancy is "a safety valve for nervous energy, and a safeguard against nervous seizures, such as eclampsia," while Dr. Playfair stated that "it was neurosis of an intense degree." Neither theory is satisfactory, for a woman prostrated almost unto death by vomiting has no superfluous nervous energy and yet she continues to vomit, and the assertion that the disorder is a neurosis is unproved. Moreover, naming a thing a neurosis does not tell us what it is.

When theories so utterly fail of establishment, and give no clear directions in therapeutics, the majority of practitioners will probably go on in the old way, first treating each case according to its conditions, and then, no obvious local disorder being present, mainly in an empirical way.

Doubtless some patients vomit because the uterus is displaced, and the physician will correct the displacement, if he can. But such cases by no means constitute the majority. In still rarer cases, the disorder may result from rigidity of the cervix, and then the Copeman method of digital dilatation may prove useful; yet we believe that if all the cases in which this method has failed were published, they would far outnumber those in which it has succeeded. Bennet's method of applying nitrate of silver to the cervix, revived by Dr. Sims and by Dr. Jones, may be required in some cases. But when all the patients amenable to these methods of treatment are numbered, the great majority remain for whom we have nothing to offer but empiricism, and we will use one or several of those remedies—such as tincture of nux vomica, small doses of ipecacuanha, or of arsenic, belladonna, morphia, ether spray to the epigastrium, oxygen, etc., possibly even pop-corn or inogluvin—which have proved or been believed useful in other cases of the disorder.

#### EXTRA-UTERINE PREGNANCY.

By NATHAN BOZEMAN, M.D., Surg. the Woman's Hospital of the State of New York, New York.

From the *N. Y. Med. Jour.*, Dec. 20, 1884.—The dangers of extra-uterine pregnancy resolve themselves, practically, into, *first*, the immediate, and, *second*, the remote. The immediate dangers are those arising, within the earlier months of pregnancy, from the lodgment and growth of the impregnated ovum in some portion of one or other of the Fallopian tubes, the dangers of the lodgment always decreasing in the ratio of its approximation to the abdominal extremity. The remote dangers are those pertaining to the impregnated ovum as regards its growth and development.

Dr. Bozeman discusses the subject in connection with the report of two cases and arrives at the following conclusions:

1. That retroversion and retro-lateroversion of the uterus, and the consequent changes in the relationship of its appendages, contribute largely toward explaining the causation of extra-uterine pregnancy.
2. That extra-uterine pregnancy probably has its seat originally in one or other of the Fallopian tubes, and that the abdominal varieties of it occur afterward from rupture of the tube (Tait), or by partial or complete escape of the impregnated ovum from the fimbriated extremity of the same.
3. That, after completing the diagnosis of tubal pregnancy between the seventh and fourteenth weeks, it is of urgent importance in all cases to destroy the life of the fetus, without delay, by electricity, the surest and safest method at our command, in order to guard the individual against the immediate dangers of rupture of the cyst, now liable to take place at any moment.
4. That the practitioner, if he does not himself feel competent to meet the threatened danger of rupture of the cyst by prompt surgical interference, should at once summon to his aid a surgeon prepared to carry out his wishes at a moment's notice.

5. That the surgeon, where rupture of the cyst occurs, as indicated by the usual symptoms of shock and loss of blood, should open the abdomen and secure the bleeding vessels without delay, success in all cases depending on the promptness and thoroughness of the procedure.

6. That the differentiation of the particular variety of ectopic gestation existing is of no consequence at this early stage, the treatment before and after the rupture of the cyst being the same in all cases.

7. That, when abdominal pregnancy is diagnosed at a later period of gestation, whether seated partially in the fimbriated extremity of a Fallopian tube or entirely within the peritoneal cavity, electricity should still be promptly employed, on the assumption that the earlier the life of the fœtus is destroyed, the less grave will be the remote dangers arising from disintegration, absorption, suppuration, ulceration, and the use of the knife.

8. That, in all cases of abdominal pregnancy, the fœtus becomes encysted more or less completely, and that, whether its life be destroyed artificially, or it dies before or at the full term of gestation, it is liable to complicate a subsequent normal pregnancy by obscuring its diagnosis and seriously interfering with natural labor.

9. That, when normal labor occurs with pre-existing abdominal pregnancy, it should be allowed to progress to its natural termination, the practitioner, of course, assisting the delivery with instruments when demanded; but that, in the event of the dead fœtus presenting in Douglas's pouch as an impediment to the normal labor, or as a prominent projection from the same locality into the vagina, immediately after the completion of labor the cyst should be opened and emptied of its contents, the delivery of both fœtuses thus being completed at the same sitting.

#### PALLIATIVE MEASURES IN RUPTURED EXTRA-UTERINE PREGNANCY.

By W. W. JAGGARD, M.D., Adj. Prof. of Obs., Chicago Med. Coll.

From the *Jour. of the Amer. Med. Ass'n*, Dec. 13, 1884.—An editorial bearing this title and appearing in the *New York Medical Record*, of Oct. 25, 1884, contains the following statement:

"There is no palliative measure for a ruptured extra-uterine cyst; there is no expectant treatment; and there is no other way known to medicine by which a woman in this condition can be reasonably expected to survive, save by the prompt use of the knife, and there is no reason for thinking that she would die if this be resorted to in time."

The object of this paper is to offer a protest against this *ex cathedra* mode of settling a question, in regard to which there is room for considerable latitude of opinion.

Tubal pregnancies may terminate: (1) in the death of the embryo and gradual resorption of the ovum, before rupture of the sac; (2) the sac may rupture, but the egg may remain within, and act as a tampon; (3) the cyst may rupture into the *ligamentum latum*, with the formation of a hæmatoma; (4) the sac may rupture into the peritoneal cavity, with the formation of a retro-uterine hæmatocele; (5) the sac may rupture into the peritoneal cavity, and the life of the woman may be threatened by free hæmorrhage, or the resulting peritonitis; (6) the ectopic pregnancy may persist until the expiration of the full period of utero-gestation. It is impossible, in the present state of medical knowledge, to make any positive statement as to the relative frequency of these terminations.

The question of treatment, when the patient's life is threatened by free hæmorrhage into the peritoneal cavity, or by peritonitis, is difficult and important.

Wiltshire, Lawson Tait, Knowlsley Thornton, and our editorial friend of the *New York Medical Record*, see in this condition an absolute indication for immediate laparotomy. There are others—and they may be justly designated "surgical leaders of the day,"—who do not recognize this absolute indication for immediate operative procedure.

The prognosis of laparotomy, after rupture of the cyst, is by no means as favorable as in tubal pregnancy before rupture. The reasons for gloomy prognosis are evident. The operation must be performed upon a woman in a condition of more or less profound shock. The state of acute anæmia exercises an unfavorable influence. Ether is dangerous, from the possibility of dislodgment of a thrombus and renewal of hæmorrhage. Chloroform must be used with *extreme caution*, on account of the enfeebled heart. The blood poured out into the peritoneal cavity is mechanically removed, instead of undergoing resorption. The *technical* difficulties of the operation are great. The anatomical relations of the parts are very different from those in cases of consecutive or secondary hæmorrhage, after extirpation of tumors by abdominal section. It is difficult, even on post-mortem examination, to differentiate between tissues and organs. *In viva*, the complications are still more intricate, as all who have had experience will testify. The choice of time, of place, and of operator, is out of the question. Abdominal section must be made without qualified assistants, and without attention to the principles of antiseptic surgery. If the patient is removed to a hospital, she may die on the way. If she survives transport, the assumption of spontaneous recovery is justifiable.

#### TWINS BORN FOUR DAYS APART.

Dr. JAMES DOUGLAS, of Morristown, N. J., writes: "A very unusual occurrence in the birth of twins has happened lately in my practice, one of the twins, a girl, being born at half-past nine on Friday night, January 2, 1885, (breech presentation), and the other, a boy, on the following Tuesday afternoon at twenty minutes to three (head presentation), a difference of three days, seventeen hours and ten minutes. They are eight months children, the girl weighing four and one-half pounds, the boy six pounds. There was only one placenta. The mother is a healthy young woman twenty-two years of age."—*Medical Record*, Feb. 14, 1885.

#### MERCURIAL POISONING FROM INTRA-UTERINE INJECTIONS.

Dr. E. L. PARTRIDGE (N. Y. Obs. Soc., *N. Y. Med. Jour.*, Dec. 20, 1884,) related the history of a case of labor that had occurred at the Nursery and Child's Hospital in which vaginal injections of bichloride of mercury, 1 to 2,000, were used, and the patient did well for three days. On the third day she had a chill, and the house surgeon gave an intra-uterine injection of the same solution. The next day there was another chill, and the injection was repeated. This was followed by bloody passages from the bowels, and death took place. Intense colitis was found post mortem. Dr. Partridge referred to reports of three other cases of supposed mercurial poisoning from the same cause. The patient whose case he had related died within sixty hours from the administration of the first intra-uterine douche.

#### TAPPING THE PERITONÆUM FOR TYMPANITES.

From the *N. Y. Medical Jour.*—Dr. JAMES B. HUNTER related to the N. Y. Obs. Soc. a case in which a patient was attacked with peritonitis three days after laparotomy, the temperature being controlled by the abdominal coil. There had been very little hæmorrhage during the operation, and no tube was left in the wound. The important feature in the case was the development of an excessive degree of tympanites, the distension being enormous. Long rectal tubes were passed by the anus, and much gas escaped, but still a great amount of distension remained and caused the patient much distress. By the twelfth day she was thought to be moribund; the pulse was over 170. Dr. Hunter then punctured the abdomen in the median line with a large hypodermic needle, and immediately gas began to escape, and continued to escape for half an hour. The patient very soon recovered from her state of collapse, and eventually went on to complete recovery. Dr. Hunter had not expected much benefit from the tapping, since in previous cases the needle had entered the intestine and let out the gas only from a limited portion of

the gut. In the present case the tube happened to penetrate only into the peritoneal cavity, from whence the gas had been unable to escape. This was the only instance he had met with in which recovery had followed puncture for tympanites. The gas which escaped was not offensive.

Dr. Nicoll said that several years ago he saw a woman, much reduced in general health, suffering from a pelvic abscess which had discharged into the vagina. She was suffering from intense dyspnoea, the result of tympanites. As a means of rendering her condition more comfortable, he punctured the abdomen in several places with a slender aspirator needle, and much foetid gas escaped, greatly to the relief of the patient, who then went on to complete recovery. Doubtless the intestine had been punctured, as the gas was of a foul odor.

Dr. Murray referred to a case in Bellevue Hospital, in which, some years ago, the abdomen was punctured for tympanites developed after an operation; a large amount of odorless gas escaped, and the patient got well.

Dr. W. M. Polk thought that in a large number of cases we could not tell whether the needle entered the intestine or only the peritoneal cavity. He had heard it stated that such punctures, even if they proved of no benefit, could do no harm, for, so long as one punctured living tissue, the opening would close again immediately on withdrawing the needle, particularly if the needle was small. This, however, was a mistake, especially when we had to do with cases of peritonitis. In healthy tissue a small hole would close immediately on withdrawing the needle, because of the elasticity of the tissue. But when one had to deal with a peritonitis in which the intestine was much inflated and its wall anatomically changed by an oedematous effusion into its muscular tissue, we found tissues which were no longer normal—tissues from which, at least in some cases, the elasticity had disappeared; and in such cases he had found at post-mortem examination holes still remaining patent which had been made by the hypodermic needle, and through which fæces had escaped into the abdominal cavity. In such cases the intestine was in a paralytic condition, and punctures with the hypodermic needle might prove dangerous.

## DISEASES OF WOMEN.

### DISEASES OF THE FALLOPIAN TUBES.

By W. GILL WYLLIE, M. D., Prof. of Gyn. in the N. Y. Polyclinic; Gynecologist to Bell. Hosp., New York.

From the *Medical Record*, January 24, 1885.—In my opinion when the frequency and the great importance of diseases of the Fallopian tubes is generally understood, the fascinating teaching of the mechanical pathologist, namely, that most of the ills of women are due to uterine displacements, that the real disease is the version or flexion, and when this is corrected and the uterus is held by a pessary in an ideal normal position that all will be well, will fade to small proportions and the relatively few lines now to be found in our text-books on salpingitis will increase rapidly, and there will not be so many hundred pages on cellulitis, displacements, and pessaries.

*Etiology.*—Anything which causes endometritis may induce disease of the Fallopian tubes, and it is probable that in most cases salpingitis is due to an extension of disease from the lining membrane of the uterus directly to that of the tubes. In virgins it is comparatively rare, except from catarrhal disease. In imperfectly developed and delicate girls and women, the degenerate state of the mucous lining makes it an easy prey to catarrhal disease, and an endometritis may be extended to the tubes. Tubercular disease may also attack the Fallopian tubes.

Many of the profession, especially those who treat genito-urinary disease in the male, look upon gonorrhœa in women as a very trivial disease, probably because it does not produce urethral strictures. When Dr. Noeggerath

read a paper on this subject before the American Gynecological Society, in 1876, his views on gonorrhœa may have been extreme, but on salpingitis they were well in advance of the general knowledge on this subject at that time, and now, if the gonococci causes the disease and he can find the gonococci in all, or in most of his cases of latent gonorrhœa, his theory will be proven to be true. There is no doubt but that gonorrhœa is a very frequent and in many instances an unsuspected cause of salpingitis. Syphilis may cause salpingitis.

Septic poisonings after labor and abortions, especially after the latter, is a frequent cause of salpingitis. Diseased tubes are very commonly associated with diseased ovaries, and I think in most instances the disease of the tubes precedes that of the ovaries, and the diseased ovaries are but the result of an extension of the disease from the tubes to the ovaries and peritoneum.

If I have a well marked case of hystero-epilepsy or hysterical patient to operate upon, I expect to find cystic or atrophied ovaries with catarrhal disease of the tubes.

*Symptoms and diagnosis.*—The subjective symptoms are very variable.

Dysmenorrhœa is a common symptom.

Sterility is the rule in salpingitis, and when both tubes are affected, which is usually the case, it is incurable, but when only one side is affected and the proximal end of the tube of the diseased side is closed, pregnancy is possible and may go to full term, but as the uterus enlarges there may be severe local pain, and abortion is likely to occur.

Perhaps the most reliable indication of severe salpingitis is the occurrence of repeated attacks of local peritonitis, or active pelvic congestion without other evident good reasons for such attacks.

*Objective symptoms.*—In acute cases there is usually so much swelling and tenderness that about all we can make out is a fulness or thickening of one or both broad ligaments, associated with more or less fixation of the uterus. Take such a case and keep her in bed until the painful symptoms completely subside. Then place thin pledgets of cotton saturated in pure glycerine against the cervix uteri two or three times a week, and, as the case becomes subacute, add alum to the glycerine and continue the pledgets for from three to eight weeks, and the inflammatory products will be so much absorbed or stretched that the uterus will become movable, and an expert may be able to define an enlarged tube or a mass that he can make out to contain a diseased tube or ovary more or less prolapsed and adherent in one or both broad ligaments. In subacute cases a diagnosis may be more easily made, but often a doubtful case can be cleared up by the same treatment recommended for acute cases. A diagnosis is especially easy when only one side is affected and the uterus is not retroverted. By the prolonged use of pledgets of cotton, soaked in a mixture of alum and glycerine, a distended tube can be readily defined by bimanual examination.

*Prevention.*—When the etiology of any disease is well understood the prevention is plainly indicated. It is important that the general health and strength of girls while developing into women should be kept up, so that the generative organs will fully develop and resist catarrhal disease. When there are symptoms of catarrhal disease, such as leucorrhœa and dysmenorrhœa they should be treated early, before it has reached the Fallopian tubes, and if the endometrium is affected by disease the uterine canal should be kept patulous so as secure perfect drainage, and thus lessen the chance of the disease entering the Fallopian tubes. Definite instructions should be given, especially to all male patients suffering with gonorrhœa, to avoid intercourse until complete cure is effected.

When we have an endometritis it is especially important that we should secure perfect drainage from the uterus. After abortions the greatest care should be taken to prevent septic infection and insure removal of all the placenta and membranes. Especial care should be taken to secure perfect involution and drainage of the uterus. Labor is normal, but abortions are abnormal, and must be regarded as almost certain to result in disease.

*Treatment.*—During the acute stage complete rest in bed is the best treatment; anodynes and counter-irritants may be used; as the active symptoms

subside, I begin the application of thin pledgets of cotton saturated in pure glycerine and applied to the cervix and vagina; they are left in place twenty-four hours, then removed and a douche of hot water given; on the third day another pledget is put in, and this is kept up for a week or two; and later a solution of one part of boro-glyceride, one of alum, and fourteen of pure glycerine is used to saturate the cotton in place of pure glycerine. After a week or so this softens out the products of inflammation and renders the uterus more movable, and enables one to make a more accurate diagnosis. It improves the circulation, and often gives, for the time, more or less complete relief to all the local symptoms. While this simple local treatment is given, close attention should be paid to the general health, and the condition of digestion, and especially the bowels, should be carefully regulated, for impacted fecal matter in the lower end of the descending colon or rectum may materially add to the pain and the effects of the disease by pressing directly on the left broad ligament.

After getting the uterus movable, so that it can be pulled pretty well down the tenaculum without causing much pain, it will be safe to sound the uterus, and, if the canal is contracted and hyperæsthetic, it should be gently dilated so as to secure good drainage and enable applications to be made to the mucous lining. If there is a history of excessive hemorrhage, and it is not corrected by tincture cannabis indica, twenty gtts. given twice a day, if the uterus can be gotten movable by the use of the medicated pledgets, it will be safe to curette the uterus for the removal of granulations. I would always give the above treatment as preparatory to operation, except in those cases where the diagnosis was plain and indicated immediate action to prevent rupture of a painful cyst, or to prevent septic poison and death after rupture. In these cases I would resort at once to the operation for removal. Aspiration through either the abdominal wall or vagina can give only temporary relief by evacuating the contents of a cystic tube or ovary, but there is some risk and little or no permanent good attained.

*Operation for removal.*—Having decided that an operation is proper, I have the patient's bowels well emptied and put her on pancreatized milk diet with very little other plain food for three or four days previous to the operation, the object being to remove all impacted fecal matter, and to lessen the amount of gas in the intestines. The day of the operation the bowels should be well moved, but not excessively.

In all surgical practice I would place cleanliness first, drainage second, rest third, and antiseptics fourth. If we could be perfect in cleanliness, antiseptics would be useless. Cleanliness is better than antiseptics, just as prevention is better than cure. Dr. Wylie then describes the operation in detail.

Dr. E. Noeggerath,—Dr. Wylie had asked whether always in cases of salpingitis the disease was caused by gonorrhœa. Dr. Noeggerath had investigated this subject, and made special researches in this direction for the purpose of demonstrating the presence of the gonococcus. Now, the gonococcus is a diplococcus, and of these four different species had been described as existing in the vagina. As yet, however, we had not been able to obtain a gelatine in which the gonococcus could be cultivated. Dr. Noeggerath had already tried four different kinds of gelatine and had had not yet been satisfied with the results—the microbes obtained by culture did not resemble the original ones. He had also compounded a coloring material which stained the gonococcus a peculiar red color, and the other tissues of a different color, but he had failed in this respect, because, as he now believed, in the uterus after a certain time—say six, eight, or ten weeks—if there be gonococci they exist in such small numbers that the micro-organisms can be demonstrated only by culture in gelatine, which as yet he had not succeeded in doing.

He could not say, therefore, whether the secretion of gonorrhœa in its chronic state was simply the result of a paralytic condition of blood-vessels, originally produced by the gonococcus, or whether the gonococcus still existed in small quantities, producing emigration of leucocytes. The demonstration of the gonorrhœal origin rested as yet only upon clinical facts.

As to the connection between salpingitis, perimetritis, and uterine dislocation, if there was anything which was characteristic of salpingitis and perimetritis, it was lateral version combined with anteversion.

He did not doubt that Dr. Wylie had seen retroversion with pyosalpinx, as there were probably such severe cases, but they were the exceptions.

The large majority of cases of salpingitis were not ready for surgical operation, and the treatment in such cases was very much like that described by Dr. Wylie; but there was one mode of treatment which he had found most efficient of all, and that was the prolonged use of the waters of Franzensbad, in Bohemia.

Dr. A. J. C. Skene said there was one point to which attention had not been directed, and that was differential diagnosis by aspiration. If it was true that ciliated epithelia were so generally present, what objection could there be to removing by aspiration a portion of fluid and examining it under the microscope? Out of twenty-one specimens which he had examined, ciliated epithelia had been found in eighteen, thus indicating the condition that was present.

This fact also raised a question with regard to treatment. After aspiration, a hydrosalpinx might not refill, and the aspiration might be followed by recovery. If the diseased tube could be thoroughly evacuated, the chances were that the cases would terminate in recovery, in many instances. He thought, therefore, it would be well, many times, to try aspiration more thoroughly than it had yet been tried, both as a means of diagnosis and as a means of treatment.

Dr. P. F. Mundé thought it was impossible to make a diagnosis in the very cases in which it was most desirable. In cases of pyo- and hydrosalpinx, the diagnosis could be made either with the fingers or by the use of the aspirator. The cases in which diagnosis was most desirable were *not* those in which there was a soft sausage-like tumor that could be distinctly felt, but were those where there existed a diffuse thickening or infiltration of the tissues in each side of the pelvic, in which the patient complained of pain upon pressure, and pain at irregular intervals, with, perhaps, discharges of small quantities of pus. In these cases the only positive assurance rested in exploratory incision.

Furthermore, he did not believe yet that laparotomy would be very frequently performed. So long as we have no means of making a clear diagnosis, the operation will not be as popular as could be wished.

With reference to treatment other than by laparotomy, Dr. Mundé had in some cases in which there was nothing but a diffuse swelling, seen more benefit follow the local application of the constant electric current than from any other means, using from twelve to sixteen cells of the ordinary battery, with sittings of from fifteen to twenty minutes every day or every other day. The benefit which had followed this treatment, according to his experience, was not in the way of greatly diminishing the exudation, or in reducing the adhesions, but in allaying the pain. This, however, did not cure pyo-salpinx with distinctly diseased tubes.

## GONORRHOEAL AFFECTIONS OF THE APPENDAGES OF THE UTERUS, AND THEIR TREATMENT.

By F. H. DAVENPORT, M.D., Boston, Mass.

From the *Boston Med. and Surg. Jour.*, Feb. 5, 1885.—Sanger, of Leipzig, in a paper read before the gynecological section of the fifty-seventh meeting of the German Naturalists and Physicians at Magdeburg, expresses the opinion that these troubles have not received the attention they should. Gonorrhœa is the cause of a greater number of severe chronic affections of the pelvic organs than puerperal fever or syphilis, and of all gynecological cases about one ninth originate in this way.

The severity depends upon whether the tubes, ovaries, and pelvic peritoneum are affected or not, and of all forms of disease of these organs the gonorrhœal are the most frequent and the most serious.

Noeggerath's division of these affections into three forms of perimetritis, an acute, a relapsing, and a chronic, and ovaritis, the author would reject for one based on the seat of the trouble. He makes four divisions: (1) of the urethra; (2) of the vulva and its glands; (3) of the vagina and uterus; (4) of the uterine appendages and the neighboring peritoneum. The author places less reliance on the presence of the gonococcus as a means of diagnosis, since the researches of Bumm have shown the difficulty of distinguishing these from other similar germs, and considers that in the majority of cases the history and examination are sufficient to establish the gonorrhœal origin.

In the way of prophylactic treatment the author would particularly urge advising against marriage until every trace of gonorrhœa had disappeared. The treatment of acquired gonorrhœa in the woman should not be considered so hopeless as many authors, especially Noeggerath and Fritsch, have thought. For the affection of the urethra, vagina, and uterus, corrosive sublimate injections are most effectual. For the later stages applications of solutions of nitrate of silver, iodine, or dilute nitric acid may be tried.

When the uterine appendages are diseased their removal is recommended as holding out a definite prospect of cure. The writer finally gives the account of four cases operated on by him. One was completely successful. In the other three some cellulitis followed, which, however, in two cases promptly disappeared.

#### THE USE AND ABUSE OF BATTEY'S AND TAIT'S OPERATIONS.

By WILLIAM H. BAKER, M. D., of Boston.

From the *Boston Med. and Surg. Jour.*, February 12, 1885.—The operation, then, of the removal of the uterine appendages for various conditions may be said to have safely passed its first danger, and to have become an established and well-recognized surgical procedure, but with this security in its general adoption arises another great risk common to nearly all operations at this stage, that of its frequent application to cases where no such serious method of treatment is necessary, and which can be perfectly cured by less severe means, without sacrificing parts which may prove to be of the greatest consequence to the patient's future happiness.

The author of the paper suggests the following conclusions:

(1.) That these operations be restricted to cases in which structural changes in the ovaries or tubes have been clearly made out in advance, and where well-directed treatment of less formidable character, though perseveringly tried for several months, has wholly failed to give relief.

(2.) That, in addition to the foregoing, the removal of the uterine appendages may be necessary in some cases where the process of menstruation immediately jeopardizes the life or the mind of the patient, even though no structural change in these organs can be previously diagnosed.

(3.) That when once the diagnosis of cyst of the ovary has been established, delay in its removal only increases the danger to the patient without giving any adequate return from the increased facility in performing the operation gained by the greater size of the cyst.

(4.) An exploratory incision may sometimes be warrantable if, from various reasons, there is an inability to perfect the diagnosis without.

#### VERSIONS AND FLEXIONS OF THE UNIMPREGNATED UTERUS.

By ELY VAN DE WALKER, M.D., Syracuse, N. Y.; Fellow of the Amer. Gyn. Soc.

From the *Medical News*, Dec. 20, 1884.—One measure of treatment nearly all gynecologists are united upon, be they mechanical or not in their notions of uterine pathology. This is the thorough treatment of inflammation both of the uterus and its near surroundings. Dr. Routh gives an important place among others to this end, to local depletion. Scarification, in my experience, serves to meet this indication better than any other means I have tried. If the patient is not æmic, this may be repeated several times at intervals of four or five days. Routh follows by blisters over the pubic region and glycerine dressings. A more potent agent is vaginal irrigation. Its value



depends not so much upon the quantity of water used as upon the length of time the parts are exposed to the action of the current. The technical term of the wash-tub is parboiled. Now it is this secondary effect of the hot water, without the parboiled stage, that we desire to reach in vaginal irrigation.

To reach the same end, leeches have been applied to the groin and pudenda, emollients baths, lavements, and fomentations, and according to nearly all of the popular school, this must be done before any attempt is made to treat the displacement (Hall, Meadows, Tilt, Boivin and Duges, Bennett).

In old-standing versions and flexions chronicity is the chief obstacle in the way of treatment. Few patients have the courage, and but few, therefore, meet with the reward, that results from the months, and in some cases the years, of treatment necessary to effect a cure. Some writers take the ground that curability is not a trait of many forms of flexions (Mundé). In these cases depletion is usually not to be thought of. In fact, we need greater energy of pelvic circulation in order to restore the balance of systemic nutrition. Iron, arsenic, quinine, with baths and liberal diet. The pain is usually neuralgic. Physicians frequently tell their patients that if they can become pregnant and successfully reach term that their displacement will be cured. It is based upon good reasoning as well as upon good authority (Hewitt, Beattie, Ashwell); but if it were said rather, that a successful delivery put the distorted uterus into a condition to be cured, it would be a better way to express it.

Some authors make prominent mention of the sound as a means of uterine reposition, as well as of diagnosis. I cannot help regarding it as a dangerous instrument for either purpose. There is an instrument invented by Sims, and "improved" by several people since, called the uterine repositor, that I regard as specially dangerous.

Some years ago we heard much of the good effects of dilatation of the cervix in flexions. Various methods have been employed. The most complete expression of the opinions of experts upon this method is found in the debate in the London Obstetrical Society, in 1879, in which a majority of those who took part in the discussion either ignored or were opposed to it.

Another method closely allied to the last, in some respects, is division of the cervix uteri. This was practised for two purposes: First, to straighten the distorted canal; and, secondly, for the purpose of enlarging it. The first is the method of Sims and Emmet, and has, I believe, run its career of doubtful utility. Peaslee severely criticises the operation of Sims; and, as I believe, very justly.

It was very popular at one time under the leadership of Simpson, Baker Brown, and Sims, when the hysterotome was considered as necessary a part of a gynecologist's outfit at a sound. I believe I am justified in saying that no other operation generally practised in gynecic surgery has offered an equal measure of injury and disappointment.

Although I speak in such unqualified terms of division of the cervix uteri, still I do use the knife upon the part whenever I meet with the condition that in my experience requires it, namely, what has been termed by some the "pinhole os."

Posture has been resorted to in the treatment of uterine versions. One method suggested is to place the patient's head and shoulders upon the floor and her pelvis upon the bed. This position was to be kept for fifteen minutes. By this means the intestinal contents of the pelvis gravitated into the abdominal cavity, while the uterus assumed its normal position (Godefroy). The genupectoral position is a much more convenient method of applying the same principle. In retroversions without fixation, the posture is very efficient in aiding the reposition of the uterus. As a preliminary to the introduction of the Hodge pessary, it is very useful and in every way safer than the sound. That a flexion could be so treated, as claimed by Edis, would hardly seem practical.

Various operative measures have been undertaken. Shortening of the round ligaments has been tried very recently, but the operation is said to be a very difficult one, as the fibres of the ligament are not easily recognized.

These various operations require no comment other than simple mention of the fact that eccentric ideas and operations always have, and very likely always will be, followed now and then in the treatment of versions and flexions.

This is the proper place to mention one method of treatment, concerning which it would be vain to make an attempt to reconcile conflicting opinion. This is the pessary.

The theory of the pessary is to a certain extent being reduced to a practical formula.

The truth is, however, that the selection of a vaginal pessary suitable to the displacement (version) and its proper adjustment, is one of the most difficult manipulations of office practice—difficulties that are not surmounted except by study and constant practice. In giving instruction in the use of the pessary, I have always kept two points constantly before the mind of the student, first, to become well grounded in the theory of the pessary; and, secondly, to reach this theoretical ideal by the simplest means possible. Avoid, therefore, all complicated pessaries.

### THE USE AND ABUSE OF PESSARIES.

By WALTER P. MANTON, M.D., Detroit, Mich.

From the *Detroit Lancet*, Jan. 1885.—Dr. Manton closes his paper with the following recapitulation: (1) We should determine the necessity of the pessary. (2) The conditions of the uterus and vagina should be such as to permit its use. (3) The pessary should fit, and the vaginal measurements be exactly and carefully taken. (4) We should be sure the pessary does all it should, and no more, before allowing the patient to depart. (5) We should examine the patient not later than a week after introduction of the pessary, and at least every two months afterward. (6) The patient should be instructed how to remove the instrument if it hurts her, or there are symptoms of irritation or inflammation. And finally, (7) The pessary should be removed as soon as it has done its work.

If these few points, which I have attempted to present, be carefully observed, there can be no such thing as abuse of the pessary, and its use cannot be otherwise than obvious to all.

### PERIMETRITIS.

By T. S. GALBRAITH, M.D., Seymour, Ind.

From the *Weekly Review*, Jan. 24, 1885.—The term perimetritis is used to signify inflammation of the tissues surrounding the uterus, including both pelvic peritonitis and pelvic cellulitis. Owing to the intimate anatomical relation of the pelvic peritoneum to the pelvic cellular tissue, it is doubtful if these diseases ever exist separately. An inflammation of the pelvic cellular tissue of any marked severity will implicate to some extent the adjacent peritoneum, and likewise, an inflammation predominating in the pelvic peritoneum will involve more or less of the cellular tissue. The lymphatic vessels may be chiefly implicated in the inflammatory mass, as pointed out by Dr. Mundé, giving us pelvic lymphangitis.

There is no doubt but we may have peritonitis, cellulitis and lymphangitis existing in the same case at the same time, and owing to the tendency of these diseases to blend together and a similarity of many of their symptoms, a correct differentiation is often difficult and sometimes impossible. But in a great majority of cases the symptoms which attend each affection are so characteristic that a diagnosis can be made with a great degree of certainty.

Pelvic peritonitis is a very common affection and one that is very often unrecognized by physicians. The severe attacks of pain and tenderness in the hypogastric region, accompanied by slight constitutional disturbance, which are of such frequent occurrence in nonparous women and young girls about their time of menstruation or soon after, are due to a mild form of

pelvic peritonitis. In more severe attacks of this affection the pelvic pain is frequently very violent, the constitutional disturbance marked; and after an initiatory chill the temperature may become rapidly elevated and continue so for several days or weeks; the face will have an anxious expression peculiar to this form of inflammation, and the knees will be drawn up to produce relaxation of the abdominal muscles. Vomiting is a very constant symptom in severe cases.

The acute stage of pelvic peritonitis may last for several days or weeks. The inflammatory process as it invades new tissue is attended with rigors and increased pyrexia. When the inflammation becomes chronic the fever ceases; but the sensitiveness to pressure remains for an indefinite time. An oversensitive condition of the peritoneum is a very constant result of this form of inflammation. In most cases of pelvic peritonitis that have existed a few days, an exudation in the form of a tumor may be found in Douglas' pouch behind the uterus.

A most obstinate and persistent form of pelvic peritonitis is that due to gonorrheal infection.

Inflammation of the pelvic cellular tissue is also a common disease. It usually begins with a chill and is followed by slight fever. Pain is felt in the abdomen; but not so severe as in peritonitis. The first stage is that of acute congestion and by digital examination we can detect increased heat in the vagina and some slight swelling or edema somewhere about the neck of the uterus. This inflammation is generally localized; its usual seat is near the uterus between the layers of one of the broad ligaments, but, it occasionally attacks the folds of the utero sacral ligaments and the adjacent peritoneum, producing contraction of the ligaments and adhesion of the surfaces of Douglas' cul-de-sac, which results in the fixation of the uterus at its lower angle to the posterior pelvic wall. From this frequently results a very obstinate distortion of the uterus, the fundus falling forward, producing ante-flexion.

The second stage, or stages of effusion always results in the formation of a tumor. These tumors vary in size from the slightest recognizable induration to the size of an orange. They are always in reach of the examining finger, and by the bi-manual method of examination can be mapped out with very great accuracy.

By proper treatment a large proportion of these exudations terminate by absorption and the tissues soon after assume their normal condition.

As to the etiology of pelvic inflammations they are no doubt mainly due to some septic agency. This is particularly the case with cellulitis and lymphangitis. The injuries due to parturition and abortion are fruitful sources of these diseases. Operations on the cervix, the use of sponge tents or other dilating apparatus, if not used with proper antiseptic precautions, are liable to be followed by some form of pelvic inflammation, most usually cellulitis.

Gonorrheal infection furnishes a conspicuous example of the manner in which a virus may act as an exciting cause of a very pernicious form of pelvic peritonitis. It is evident that prophylaxis is of the greatest importance in perimetritis. Antiseptic treatment should be strictly observed in all cases of labor, abortion and in every form of manipulation on the uterus. In the congestive stage of perimetritis Dr. Emmet claims that by the *early and long-continued* use of the hot vaginal douche the disease may be aborted. I have no doubt of the beneficial effects of this treatment. If the disease is not aborted the area of tissue involved in the inflammatory process, as well as the amount of effusion, is materially lessened.

However, the time for the abortive treatment is usually passed before the patients come into our hands. If effusion has taken place and the symptoms are still acute, any form of treatment per vaginam is inadmissible. Our chief reliance under such circumstances is opium, which should be given freely and repeated sufficiently often to keep the patient absolutely free from pain. Other remedies may be required, such as aconite, veratrum viride and possibly fomentations to the abdomen; but, the essential features of the treatment should be the annihilation of pain and maintenance of perfect quietude until the acute symptoms subside.

## THE CURETTE IN UTERINE THERAPEUTICS.

By GEO. T. HARRISON, M.D., Asst. Surg. to the Woman's Hospital, New York.

In a paper published in the *N. Y. Med. Jour.*, Dec. 20, 1884.—Dr. Harrison says that the use of the curette is indicated in the following morbid states of the uterine mucous membrane: (1) In *sarcomata* and *carcinomata* of the inner surface of the body of the uterus—when, for any reason, more radical operative procedures are contra-indicated—the use of the curette yields here very satisfactory results, though of a palliative character. (2) In these puerperal conditions of the endometrium evoked by retention of the remains of the ovum or decidual membranes. When delivery has occurred at term, and symptoms during the puerperal state point to the retention of the placenta, or pieces of the membranes, it is not necessary, as a rule, to resort to the use of the curette. A much wider field, however, for the curette opens when pregnancy is interrupted in the first three or four months. The manual removal of portions of retained ovum or decidua in such circumstances may often be achieved, but it nevertheless occurs that this method cannot be adopted. (3) In the various forms of endometritis, especially those characterized by menorrhagia and metrorrhagia, in which the degenerated mucous membrane has given rise to fungous granulations, the scope of the curette's application is an extensive one. (4) In those small, benign neoplasms of the mucous membrane of the body of the uterus that are still confined in their growth to the uterine cavity—such as mucous and fibrinous polypi and adenoid growths. The application of Sims's curette, especially, can here effect the ablation of these small neoplasms with certainty. Dr. Emmet's curette-forceps can also be used advantageously in these cases. (5) In the secondary endometritis of areolar hyperplasia (chronic metritis), and in the endometritis complicating myoma uteri. The application of the curette in these circumstances is a limited one. The procedure is especially dangerous in the case of myoma, as, in consequence of an interference with its nutrition, the myoma may suffer necrosis and undergo putrefactive decomposition, if infectious matters have been introduced into the uterine cavity. Thomas's wire curette, however, in this latter form of endometritis, has afforded excellent results, in my hands, in a number of cases.

Lastly, the curette is applicable for diagnostic purposes; when abnormal secretions and hæmorrhages indicate a morbid condition of the uterine mucous membrane, the curette is the most certain and simplest means of making an exact diagnosis. The patient should be instructed to use vaginal douches of an antiseptic solution for some time previous to the performance of the operation. The time selected should be preferably soon after menstruation. The patient must be placed upon a suitable table. The anterior lip of the os uteri is seized with a tenaculum, and, unless already sufficiently open, the cervical canal should be dilated by the introduction of steel sounds (or Hegar's hard-rubber dilators) passed in succession until the proper degree of dilatation is effected. Before and after the application of the curette the uterine cavity should be thoroughly disinfected by an intra-uterine injection of an antiseptic solution; without the expenditure of much force, the curette scrapes the anterior wall, then the posterior, and afterward the lateral angles. After this operation the patient should keep her bed for four or five days.

## OVARIOTOMY.

By J. H. VAN EMAN, M.D., Prof. of Clin. Med. in the Kansas City Med. Coll.

From the *Kansas City Med. Record*, January, 1895.—Following the literal meaning of the word, I entitle this paper "Ovariectomy;" limiting the use of the word, so far as this paper is concerned, to the extirpation of the ovaries for causes other than the presence of ovarian tumors. Other names might be used to designate this operation, such as Battey's, Tait's, or Hegar's operation. The operation is made for three purposes: (1.) For the premature induction of the menopause. (2.) For the arrest of the growth of fibroid or other uterine tumors not removable by surgical procedure. (3.)

On account of hydro- or pyo-salpinx and inflammatory diseases of the ovaries and other uterine appendages not amenable to medical treatment.

Under the first-class will come: cases of ovarian neuralgia, periodical in character and occurring only at the menstrual period; membranous dysmenorrhœa and hystero-epilepsy, in which the attacks are coincident with menstruation. Long-continued dysmenorrhœa is undoubtedly a result of disease of the uterine appendages, and may require the operation; also reflex neuroses of various kinds, evidently arising from unhealthy ovaries. In none of this class of cases should the operation be made until every other means of treatment has been exhausted.

Class second. For the arresting of the growth of fibroid tumors, the operation has not been made often enough to settle the question as to the effect it would have on the tumor; but from what I know I am strongly in favor of the operation in suitable cases. The whole of the uterine appendages should always be removed in this class of cases.

In the third class, viz., hydro- and pyo-salpinx, resulting in pelvic inflammation of more or less severity, no treatment, medical or surgical, avails in the least to ameliorate the condition of the patient other than extirpation of both the Fallopian tubes and ovaries. The only difficulty is in making the diagnosis. The fact having been determined that one or both Fallopian tubes are distended by fluid, be its character what it may, or that there is a strong probability that the ovaritis has gone on to suppuration, and early operation is imperatively demanded. The operation has been undertaken by various surgeons for all these causes or reasons, and for others not enumerated in this paper.

While abdominal surgery has in the last twenty years been robbed of much of its terrors, I am far from believing that extirpation of the uterine appendages is an operation of so little danger as is held forth by some operators. There is no doubt but that the operation has been performed unnecessarily, and doubtless will be again. As we come better to understand the conditions requiring such operations, there will be less and less reason for this charge to be true. In furtherance of this object I shall now proceed to report six cases in which I have made this operation.

*Recapitulation:* No antiseptic spray or any other of the plans of antiseptic management was followed in any of these cases, except absolute cleanliness and the use of carbolyzed dressing, and covering the whole abdomen with a thick layer of absorbent cotton. In Case VI the bichloride solution was used instead of carbolic acid. From what I have seen in the practice of others, I am not favorably impressed with the use of the spray in abdominal surgery. In cases I, II, and VI the result has been everything that could have been asked, or at least expected; all these have been changed from a condition of hopeless invalidism to one of comparative comfort and usefulness. Case II has undoubtedly had several years added to her life. The results in case IV are still in doubt; however, from not being able to do any work for months, she after the operation was able to travel a journey of 1,500 miles.

The fatal result in Case III was almost entirely due to the mistake having been made of trusting to the thermo-cautery instead of ligations. Had I used the ligature as in the other cases, her chances of recovery would have been increased a thousand-fold. The thermo-cautery should, if used at all in these cases, be for searing the stump after secure ligation and in checking bleeding in the line of the incision. Another factor in both the third and fifth cases that had a strong influence in determining the fatal result was the long sojourn of the patients in a general hospital both before and after the operation. The strongest factor in the causation of death in Case V was hospitalism. I will not again, under any consideration, make the operation in a general hospital.

Another mistake made in the operation in Case V was that when it was found that the right ovary, if it *ever* existed, had disappeared—the left ovary having been successfully removed—the incision should have been closed and the operation brought to an end with the hope that all the trouble came from the left ovary and a cure would result.

### MURIATE OF COCAINE AS A LOCAL APPLICATION IN VAGINISMUS.

By THEOPHILUS PARVIN, M.D., L.L.D., Prof. of Obs. and Diseases of Women, in Jeff. Med. Coll., Philadelphia.

From a lecture published in the *Amer. Practitioner* for Jan., 1885.—The next patient is married, but for some months passed has suffered so severely from vaginismus that coition has been impossible. I have made no examination, but Dr. Morris has; and he states that so strong is the contraction of the vaginal sphincter it is impossible to introduce the finger into the vagina without difficulty and causing severe pain. He is desirous of trying the effect of a new local anæsthetic, the muriate of cocaine. The doctor will now apply a four per cent. solution of the drug to the vaginal orifice, and while waiting its effect, which will be complete in ten minutes, a few words may be said upon the subject of this disorder.

The form of vaginismus with which you will most frequently meet is that involving the vaginal sphincter. It was very well described in a paper presented to the London Obstetrical Society several years ago by our eminent countrymen, the late Dr. J. Marion Sims, though he was by no means the first to observe it and to describe cases of the disorder. The application of sedatives to the vulvar and vaginal canal, gradual or abrupt dilatation, division of the sphincter and incision of the so-called perineal body, are among the means that have been resorted to for its cure. I need not mention the use of anæsthetic inhalations; for example, etherizing the patient, as has been done in this country, and as still advised by an eminent authority. Undoubtedly it will be a great gain if the muriate of cocaine accomplishes all that Dr. Morris anticipates from it.

The causes of this variety of the disease are many, such as sensitive tumor of the urethral meatus, vaginal fissures, etc., but in many cases there is no local disorder explaining the spasm, and then it is spoken of as a pure neurosis.

There may be a vaginismus affecting not the sphincter but the canal itself, caused by contraction of the levator ani. I need hardly remind you of the origin and insertion of this muscle, and show you that its strong contraction will narrow the vaginal canal. Elsewhere I have recently shown that we must go back at least two centuries to find the first description of this disorder, so that upon this subject we are not so very much wiser than were some physicians in the sixteenth century. But let us turn to the patient and ascertain what, if any, effect has been produced by the medicine. Dr. Morris states that the vaginismus has entirely disappeared. We may add, therefore, the application which you have seen just now to the therapeutic uses of cocaine and to the therapeutics of vaginismus.

### THE NERVE-COUNTERFEITS OF UTERINE DISEASES.

By WILLIAM GOODSELL, M.D., Prof. of Clin. Gyn. in the Univ. of Penn.

From the *Medical News*, December 6, 1884.—The crying medical error of the day is, the mistaking of nerve-disease for womb-disease. From this widespread delusion it has come to pass that no organ in the human body is so overtreated and, consequently, so maltreated as the womb. Fine lesions of nerve-ganglia are hard to make out, however exacting their symptoms. Take, for instance, insanity or epilepsy; even in the dead-room their lesions often elude our instruments of precision. But the womb, unfortunately, being reachable, seeable, and directly treatable, is charged with almost all the ills that female flesh is heir to; and it is too often made the scapegoat for headaches and nape-aches, for spine-aches and back-aches, and for various other so-called uterine symptoms which may be due solely to nerve-exhaustion, or malnutrition of the nerve-centres, and not to reflex action from some real or supposed uterine disorder. Then, again, misled by traditional teaching, by such a name as woman (womb-man), by such a misnomer as hysteria (womb-disease), we yoke our practice to theory. So whenever we find a train of

*hysterical* symptoms associated with a disordered or a displaced womb in a *womb man*, we jump with doubled energy to the conclusion that the uterine lesion is not a symptom, or a sequence, or a coincidence, but the factor, and at once proceed to treat it accordingly. Then, again, forgetful that the imponderables are great forces in nature, that a single mental stimulus to unstable nerve-molecules will awaken many reflexes, we overlook the tyranny of woman's oversensitive organization, and underrate the influence of nerve perturbations or of psychical disturbances.

### PELVIC ABSCESS.

By C. A. LEE REED, M.D., Prof. of Obs. and Gyn. in the Cincinnati Coll. of Med. and Surg.

From the *Atlanta Med. and Surg. Jour.*, Jan., 1885.—There are several distinct methods of treating pelvic abscess. We have the old expectant plan—do nothing and expect your patient to get well—or die; we have treatment by evacuation, which may be accomplished by the knife, but is generally done by the aspirator, the needle being thrust either through the vaginal wall or through the abdominal wall into the abscess; and then we have the method of Tait, which is also one of evacuation, but which consists in opening the abdominal wall, stitching the abscess sac to the margins of the incision, opening the sac freely, cleansing it thoroughly and finally treating it with the drainage tube.

The expectant plan of treatment was the one given us as our heritage by the surgery of but yesterday. That the let-alone policy is a mistake, particularly when adopted as an unwavering rule of practice was and is apparent by the mortality attending its adoption. That was the day when rest, hot fomentations to favor suppuration, anodynes to lull the pain while the victim's viscera were rotting; that was the day when it was thought best to wait for the abscess to *point*, and when in cases threatening to point externally, it was urged that it was "better to wait until the skin is thoroughly implicated." Do not think the day of such teaching long since passed. The author who enunciated those views has but recently sent them forth again, quite unmodified, in a late American edition of his work on "Diseases of Women," while he himself commands respectful attention as teacher in one of the London schools. His doctrines, however, are of the past.

I don't want you to think that I don't believe in rest, tonics and good diet, for they are essential concomitants of any treatment that is successful. It is well to pursue the non-intervention treatment, too—for awhile; that is, until you are sure you have a deposit in the cellular tissue. It will not be within your diagnostic ability to tell whether the accumulation is one of serum or of pus, although, by careful attention to symptomatology, you may do some creditable guessing. It is your duty to act on the supposition that it is pus and not serum, and then it is your further duty to act on the sound surgical doctrine that pus is never to be allowed in healthy tissue. But be sure of your diagnosis.

As conservatism should be your law until your diagnosis is made, and made beyond a doubt, radicalism should be your watchword until you have emptied and cleansed the abscess, and cleaned it too, to a certainty. The aspirator reduces the operation to one of minor surgical importance.

The woman is placed in Sim's position. The aspirator is exhausted and the needle is oiled. The needle is seven and a half inches long, and has a groove upon one side of it. The length of the instrument enables me to use it with one hand, using my index finger as a guide. Having withdrawn the pus a similar quantity of antiseptic water—bichloride of mercury, one to a thousand—is placed in another bottle, into which the stopper of the aspirator with a recurrent tube is inserted. The pressure is now reversed and the water is thrown into the abscess cavity and again withdrawn. This process is repeated until the water comes back clear. What shall I now do? You would naturally say remove the needle of the aspirator, but there are cases in which this would not be the final stage of the operation—You remember I called your attention to a groove upon one side of the needle which makes it

practically a grooved director. Now, in some cases, I slide my bistoury up along that groove until I have made a free opening into the now emptied sac, an opening large enough to admit of the introduction of a drainage tube. I do not do that in this when the fluid is almost sero-purulent—very thin and laudable; and the antiseptic fluid thrown in removes all that remains, and renders the cavity quite healthy. If, however, the pus is thick and dark, or green, an incision should be made and a drainage tube inserted, through which antiseptic fluids may be thrown daily or oftener.

A lady came to me for operation upon an abscess that I had diagnosed some time previously. The aspirator was used, and an incision was made through which I introduced Thomas' dull curette and treated the cavity with some judicious roughness. I then washed it out with 1-1000 corrosive sublimate solution and introduced a drainage tube. The discharge was improved in character from the start, and gradually diminished in quantity until it disappeared on the eighth or ninth day. You may wonder why I used the curette. It was to remove from the inside of the cavity certain pathological formations that have been found to be the fountain and origin of pus in cases of recurrent abscess. The day of the pyogenic membrane is passed, so it is necessary to call these structures by another name. The philologists of our profession have, I believe, slighted this subject, so, for want of a term more definite and definitive, we must speak of these formations as granulations. Byford considered it was necessary to break these down, and found upon trial that the abscesses did not recur, although he held that the remnant of the preexisting disease was a kind of cavity which filled with serum and remained inactive. I believe that by use of the curette and antiseptics, these cavities have been entirely obliterated in cases occurring in my own practice.

The question arises, when it is proper to use the aspirator, followed by the bistoury, and when should the operation of Tait be performed? I should say that where the tumor lies along the utero-vaginal juncture and does not extend above the brim, I would select the vaginal operation; but in those cases in which I had to press hard against the vault of the vagina to reach the lower portion of the tumor, and in which the upper margin of the tumor is easily discernible above the brim, I would employ abdominal section. In the latter case there is an operation that is sometimes employed as an alternative; I mean the use of the aspirator through the abdominal wall. This is a procedure that I do not like. In the first place, the sac to be emptied is generally greatly distended, and is, in consequence, thin and friable. The act of puncture may cause, indeed has caused rupture, with speedy fatal results. There is no opportunity of breaking down the pus-secreting granulations on the inside of the sac. There is, indeed, a general lack of facility for adopting any of these important surgical measures which we have already found so essential to success. The operation of paracentesis abdominis has received the stamp of disapproval by the leading operators in cases of ovarian cystoma; how much more emphatic should be our denunciation of the operation under conditions much more menacing to life. The usual contents of a cystic ovary are not so fatal to life when liberated into the peritoneal cavity as is the pus from one of these, or, indeed, any other abscess.

### CYSTITIS IN THE FEMALE.

By WILLIAM GOODALL, M.D., Prof. of Gyn. in the Univ. of Penn.

From the *Medical Bulletin*, Jan., 1885.—Fortunately, cystitis in the female is not so serious a disease as it is in the male. One reason is because in woman the urethra is shorter, being not over an inch and a half in length. There is no prostatic gland to complicate matters. The calibre of the female urethra is much larger than that of the male, and this fact, in connection with the shortness of the urethra, explains why a woman empties her bladder so quickly.

It is not always easy to draw the line between simple irritability of the bladder and a true inflammatory condition, for sometimes there will be a deposit in irritable bladder. Of course, if there is a large quantity of stringy



mucus or pus, the nature of the case is evident. When a woman comes to you with a trouble of this kind, one of the best remedies by the mouth is belladonna in some of its preparations. It is always a good plan to test the urine. If it is acid, alkalies in large doses may be given. It is also a good plan to give a remedy to act on the kidneys and dilute the urine. Sweet spirits of nitre or buchu may be given in combination. A very excellent preparation is one containing bi-carbonate of soda, belladonna, sweet spirits of nitre, and buchu. It will, however, be found that if the case is one of true cystitis, local treatment must be employed. This consists of introducing a catheter, emptying the bladder, and injecting various solutions. The preparation which, taking it all in all, is the best in chronic cystitis, is a solution of nitrate of silver, beginning with two grains to the ounce and gradually increasing the strength. When a strength of from twenty to sixty grains to the ounce is used, the solution must be allowed to remain only a short time. The reason why there is a certain amount of tolerance on the part of the bladder to these strong solutions of nitrate of silver is, that almost at once a pellicle of chloride of silver is formed which prevents the action of the remedy. When the strong solutions are used they cause considerable pain, and the hypodermic syringe should be ready to use if necessary. These solutions should be allowed to remain only for ten seconds. After the solution flows out a solution of common salt may be injected. This is perhaps the most efficacious treatment, but anything that will wash out the bladder will do good. A solution of nitric acid, from two to five drops to the ounce, is often of service.

If these measures fail, one of two things may be done: One of these is to introduce a self-retaining catheter. This should be a Goodman catheter, which is short and does not hit the fundus of the bladder, for, when anything passes the neck of the bladder and irritates the cavity, the bladder spasmodically contracts. This reminds me to say that when you have to draw the urine in a case of irritable bladder or in cystitis, the catheter should not be passed beyond the neck of the bladder. The instrument should be passed slowly, and as soon as the urine begins to dribble, it should be arrested at that point. If the catheter touches the inner surface of the bladder you will feel the organ grasp the instrument, giving the same sensation as is felt when you suddenly turn a spigot through which water is flowing. A self-retaining catheter will sometimes do good by drawing off the residual urine and keeping the bladder empty. The objection to this is, that few women will permit a self-retaining catheter to remain, as it is too irritating.

The other plan is to make an artificial vesico-vaginal fistula.

When you have a case of nervous bladder, you do not at once go to work and perform the operation. The first thing to do is to treat the case for nervousness. The best treatment is the Rest-treatment, of which I have spoken so often. Put the patient to bed, have her manipulated, use electricity, give a milk diet, and, after a time, she will get a real appetite, and then she can be fed up. Women eat enormously under these circumstances. She grows fat and the cystitis disappears, for it was the evidence of lack of nutrition. As a German physiologist has said, "Pain is the cry of a starving nerve for food." By feeding the patient, you will find that this irritable and nervous bladder will become tractable, and, in the great majority of cases, a cure can be effected without an operation. There are some of these cases which cannot be cured, and the same is true of cystitis.

How are such cases to be treated? They are to be treated by forcible dilatation, but this operation is to be done with care. In regard to the extent of the dilation, I should advise you to begin the dilatation with the uterine dilator, then introduce the little finger of the left hand and dilate to this extent. My forefinger is not very large, but yet I rarely dare to dilate to its full extent. Those who have a large index finger should not introduce it. There are graduated urethral dilators for this purpose, which, on the whole, might be better and safer, but I have always done the operation with my finger. The amount of improvement which is secured in some cases is astonishing.

## CYSTOTOMY FOR VESICAL TENESMUS.

By NICOLAS SAN JUAN, M.D., Adj. Prof. of Descriptive Anatomy in the Escuela de Medicina de Mexico.

From the *N. Y. Med. Jour.*, Dec. 24, 1884:—In not a few instances cystotomy is performed with the view of getting rid of the vesical tenesmus which in many cases is unbearable to women suffering from some uterine complaints. This operation is performed under the belief that vesical tenesmus is located in the sphincter of the bladder, and I shall endeavor to prove that this opinion is erroneous, and to show at the same time that vesical tenesmus takes place in the walls of the bladder instead of in its sphincter.

The author gives the history of four cases of vesical tenesmus, and says:—I believe these clinical data not to be numerous enough to solve the question at once, but I will call your attention to these facts: 1. That in the first case *there was no muscular ring in the neck of the bladder*, and, nevertheless, the tenesmus existed and was subdued by improving the condition of the vesical mucous membrane. 2. That in the second patient the tenesmus *was coincident with the absence of the muscular fibers of the neck of the bladder*, and disappeared by removing the irritation of the same bladder. 3. That in the third case the urethro-cystotomy proved unsuccessful, the tenesmus having been controlled only by local treatment of the vesical mucous membrane. 4. And, finally, that in the fourth patient no alleviation at all was obtained by disabling the sphincter from contracting.

Furthermore, the physiologist, Dr. Küss, in his "Treatise on Physiology," expresses himself in such terms, when on the subject of micturition, as to support my opinions.

Dr. Juan quotes extensively from Dr. Küss, and concludes his paper as follows:—The statements of Dr. Küss being in entire accordance with the clinical facts already spoken of, I think the following propositions may be deduced therefrom: (1) Both vesical tenesmus and the normal necessity of emptying the bladder take place under the same mechanism, with this difference: that the pathological necessity of emptying the bladder is attended with pain, and oftener felt on account of some special conditions of the urine and of the mucous membrane. (2) Tenesmus sets in as soon as an existing cause acts upon any part of the urethro-vesical membrane when this is in a pathological condition. (3) When there is tenesmus, the contractions take place in the body of the bladder instead of in its neck; and the same, I assume, may be applied to every cavity closed by a sphincter, as all the muscular rings are ruled by the same laws.

## GONORRHOEA IN THE FEMALE.

By ANDREW F. CURRIE, M.D.

From the *N. Y. Med. Jour.*, Jan. 24, 1885.—Some of the conclusions which may reasonably be deduced from the foregoing review of this subject are the following: (1) Gonorrhœa in the female deserves more thorough investigation than it has yet received, especially in the light of recently established facts. (2) The diagnosis of the disease, with improved methods of investigation, chief among which are Sims's speculum and the microscope, is not so difficult as it has hitherto been considered, even in the absence of direct information of actual exposure to gonorrhœal infection. (3) There is a difference between the characteristic discharge of true gonorrhœa, as to both its nature and its effects, and other mucoid discharges from the female genital tract. As a corollary to the foregoing statement, while investigators differ as to the significance of the micrococcus of gonorrhœa, its constant presence in the discharges is not denied. (4) Gonorrhœa in the female is identical with gonorrhœa in the male. The fact of individual peculiarities and susceptibilities is not questioned. (5) A series of careful investigations upon well-defined cases, in a hospital or other place in which the changes and developments can be accurately noted, is desirable. No line of treatment can be recommended as unfailing and entirely satisfactory until the results of such investigations are known.

NOTE.—Since the foregoing was written, an article by E. Bumm has appeared in the *Archiv für Gynaekologie*, Band xxxiii, Heft 3, entitled "Contribution to the Subject of Gonorrhœa of the Female Genital Organs" ("Beitrag zur Kenntniss der Gonorrhoe der Weiblichen Genitalien"). This article is important as a recent confirmation, after careful study and experimentation, of the doctrine that gonorrhœa is a bacterial disease. Neisser and Bockhart's investigations (to which allusion is made in the foregoing) are emphasized, and the pathology of the disease, from the germ-theory standpoint, is developed in a very interesting manner. As to the clinical features, no different opinions are expressed in that article from those which I have endeavored to set forth in mine.

#### SARCOMA OF THE UTERUS.

Dr. H. C. COE [N. Y. Path. Soc., *Medical Record*, Jan. 17, 1885] presented a specimen of sarcoma of the uterus removed at autopsy. It was interesting chiefly on account of the rarity of the disease and the progress of the case. The woman was upward of thirty years of age, married, and entered the Woman's Hospital complaining of severe pain in the lower part of the abdomen, with frequent uterine hemorrhage. The uterus was dilated, and the entire canal curetted, with the result of removing about one ounce of soft, brownish-looking material, which on examination was found to be round celled sarcoma.

Although the disease was rare, Dr. Coe had seen another specimen of like character about one week previously, in which the entire uterus was removed. Dr. Emmet had still retained the statement, in the last edition of his book, that he has seen only six cases of sarcoma of the uterus, which agreed very well with statements made by other authors. During his term of service in the Woman's Hospital, Dr. Coe had collected five cases, and was of the opinion that the disease was frequently overlooked, and that diffuse sarcoma was frequently diagnosed as fungous degeneration of the inner surface of the uterus. In the present instance the growth was not recognized before curetting was performed.

#### MANGANESE AS A REMEDY IN MENSTRUAL TROUBLES.

From the proceedings of the *Chicago Med. Soc.*, Jan. 5, 1885, Dr. F. H. MARTIN read a paper in which he alluded to a former publication of his own on the subject, in the *Medical Record* for September 29, 1883, and stated that, having continued his observations, he felt able to add much confirmatory evidence of what he had already advanced. He was convinced that manganese would relieve certain forms of menorrhagia and metrorrhagia, as well as amenorrhœa. As these conditions depended upon so many different causes, it was quite necessary to point out exactly the states in which manganese was indicated. He had been led to regard the remedy, in any form, as a direct stimulant to the uterus and its appendages.

In young girls who were irregular in the early months of menstrual life, from natural weakness of the partially developed organs of generation or an over-worked nervous system, the organs were robbed of their natural nerve force. Permanganate of potassium seemed to possess the stimulating properties requisite to bring about a healthy action. A typical case was that of a young woman who had menstruated but once, after which eight months had passed without a flow. The permanganate was given in two-grain doses twice a day, and she menstruated for a second time within a week.

Patients who suffered with suppression or excess of the menstrual flow as the result of exposure to cold would invariably be found to have weak and susceptible menstrual organs. In such cases the action of manganese was prompt and gratifying.

Manganese was an efficient remedy in certain forms of menorrhagia and metrorrhagia. Although menorrhagia and amenorrhœa were exactly opposite manifestations, they very often depended upon the same causes. When the cause was anæmia or any depressing constitutional disease, producing a per-

version of the functional activity of the organs, the perverted action consisted of an irregular or excessive flow, and it would yield as readily as the opposite condition to the stimulating action of manganese.

Although, like nickel, zinc, iron, and silver, manganese acted as a tonic to the blood in cases of anæmia, chlorosis, etc., it could not be owing to that fact alone that it exerted its peculiar influence on the catamenia, for its action was too prompt. It might be given in the form of the permanganate of potassium or as the binoxide of manganese. The former should be dissolved in water, and, when possible, it should be given after meals. It could also be prescribed in dry gelatin capsules, but it was less likely to irritate the stomach if it was diluted. The binoxide, although less readily absorbed, on account of its insolubility, was not irritating, and could readily be administered in pill form.

Dr. Paoli had used manganese for the past two years, and had found it act very well in some cases of suppressed menstruation from the effects of wet and cold, but in some instances it had had no effect.

Dr. J. Havens had treated over fifty cases of menstrual difficulty with permanganate of potassium, and had been much pleased with the results. In the majority of his cases menstruation had been suppressed or retarded from the effect of cold.

#### IS A WOMAN WITH AMENORRHOEA MARRIAGEABLE.

The following is from a lecture by J. MATTHEWS DUNCAN (*Medical Times and Gazette*): The commencement of menstruation may be long delayed, or the function may never be established—*emansio menium*—a condition often the result or accompaniment of bad health, always a very important matter in social respects. Such women may have no internal genital organs, or only part of them, or only imperfectly developed organs; and there may be no ground for suspecting imperfection, the women being vigorous, and in all other respects fine specimens of the race. Treatment for *emansio* is generally set agoing early and pursued diligently; and soon the question arises how long is it to be pursued? There is little difficulty in the earlier years if the girl is chlorotic or otherwise in bad health, for these conditions urge the practitioner. There is little difficulty, also, if the girl is ill-developed in her bodily figure, if she is still plainly a mere girl. But it soon, in all cases of entire absence of menses, becomes desirable to know whether or not she can menstruate or should be expected to menstruate; and this especially in robust healthy women. In any case it is common to delay local examination till the age of nineteen or twenty is reached, and then it is done only with the approval of the patient. But necessity for examination may be precipitated by a proposal of marriage. A woman is not wise to marry who has imperfection of the genital organs. In ordinary circumstances regular menstruation is held as sufficient evidence of perfection. When menstruation has not been commenced it is necessary to make examination to ascertain if they are perfect in form and size so far as examination can decide. If they are well sized and well formed it is still a matter for consideration whether or not the married state should be entered upon. Were it certain that a woman who has never menstruated cannot bear a child, she should not be married, but it is not known that, while pregnancy is not to be expected, it may occur and be successfully carried on.

I have said that the establishment of menstruation is held, in ordinary life, as sufficient evidence that a woman is marriageable so far as her genital organs are concerned. But this is not a warranted conclusion, and it remains as a practical guide only, because imperfection is very uncommon, and still more rare in women who menstruate. It is a very interesting and still unsolved question—how small a womb can be successfully pregnant. Certain it is that a very small one may be unsuccessfully pregnant. Long ago I published a case, where a womb was well ascertained to be not above two inches in length from os externum to inside of fundus. This woman was repeatedly pregnant, and had early abortions, and in one of these which I examined, there was marked hypoplasia of the decidua. Under the influence of

repeated pregnancies the woman's womb did not increase in size—it remained an undersized organ. It has been fondly imagined that a womb may be made to grow—a natural or healthy growth—and to menstruate—not merely bleed a little—by irritating it with intra uterine pessaries; but there appears to me no rationality in such expectations, and I advise you not to resort to such treatment. There are other evident objections to it besides the danger of it inducing inflammation, and even causing death. If repeated pregnancies do not make a womb grow to its natural bulk, a rod of metal inserted into it is not likely to make it grow or to do anything but harm.

While, with the restriction stated, regular menstruation is held as evidence of marriageableness, you must not hold that absence of menstruation is proof of the opposite. A woman may have every quality or attribute of marriageableness who menstruates irregularly, or rarely, or even who has never menstruated at all.—*Medical Age*, Dec. 10, 1884.

## DISEASES OF CHILDREN.

### PNEUMONIA IN YOUNG CHILDREN.

By L. EMMETT HOLT, M. D., Attend. Phys. to Children's Dep. of Northwestern Dispensary, New York, Instructor in N. Y. Polyclinic.

In a paper published in the *Medical Record*, Feb. 14 and 21, 1885.—Dr. Holt uses the terms lobar and broncho-pneumonia, instead of croupous and catarrhal, or lobular, to designate the two varieties, while broncho-pneumonia is the form essentially peculiar to early life, the lobar variety occurs often enough to demand a portion of our consideration.

Regarding the *seat of the disease*, the order of frequency is, first, the right apex; second, the left apex; third, the left base; fourth, the right base.

*Physical signs*.—Generally speaking, these do not differ essentially from those in the adult. The subcrepitan râle, is more frequent than the crepitan; in fact, the latter I have rarely heard.

It is extremely difficult, well-nigh impossible in an infant, to examine the supra- and infra-clavicular and the high axillary regions satisfactorily and thoroughly with the naked ear.

*Diagnosis*.—Although in most cases this is easy, it presents in some very great difficulty during the first two or three days before positive signs of consolidation appear.

Practically I have found lobar pneumonia difficult to distinguish from scarlet fever, typhoid, meningitis, tonsillitis, malarial fever, pulmonary congestion, and broncho-pneumonia.

The invasion of pneumonia and scarlet fever are very similar. We must wait for the physical signs of the one or the rash of the other before pronouncing a positive opinion.

The cerebral symptoms of pneumonia are rarely so intense, so prolonged, so continuous, or so progressive as those of meningitis, although almost every individual symptom of the one may be present in the other.

The onset of malarial fever and pneumonia are very similar; both usually begin abruptly with vomiting, convulsions, or a chill; in both we have the sudden rise of temperature to from 103° to 105° F.

### BRONCHO-PNEUMONIA.

By this term I understand an inflammation which affects the mucous membrane and the walls of the bronchi, the air-cells, and the interstitial tissue of the lung. The bronchial element predominates, in fact forms the characteristic feature.

All the latest writers upon the pathology of this disease agree that we can no longer draw the line between broncho-pneumonia and that condition formerly described as capillary bronchitis. The terms are used synonymously. This form is spoken of as generalized, diffuse, or disseminated pneumonia.

The sexes in broncho-pneumonia are about equally affected.

The clinical picture presented by broncho-pneumonia is a decided contrast to the lobar form in most of the prominent features. It is nearly always secondary; attacks children debilitated by previous disease; its onset is gradual; it rarely terminates by a crisis, and has no typical course. When it supervenes upon an attack of bronchitis it may be so gradually that it is difficult to tell exactly when the extension took place.

*Physical signs.*—It is upon *auscultation* that we must mainly rely in the diagnosis of this disease.

The sibilant r le is usually the first sign in the generalized or "suffocative" cases. Vesicular breathing may be almost absent from the obstruction in the bronchi. These r les, when thus generalized, are replaced in a day or two by mucous clicks and moist r les of all sizes equally diffused. These may be the only signs during life.

Absence of vesicular breathing does not always mean hepatization. It may be due to great obstruction in the bronchi with collapse of the air-cells, or to congestion. Pure bronchial breathing, such as is heard in lobar pneumonia, does not usually exist. When it does it is combined with other signs which are found in that disease.

When a consolidated area exists in one lung the transmission of the sounds to the opposite side may be so distinct as to lead to the supposition of disease there. Percussion usually enables us to correct this mistake. In all cases the signs vary greatly from day to day, changing with the depth of the respiration, the position of the child, etc. Repeated examinations are always necessary before pronouncing positively in regard to the condition of the lungs.

*How does broncho-pneumonia terminate?*—Of the fatal cases the vast majority die during the acute stage. Of those who survive this period by far the greater number resolve in from three to four weeks where consolidated areas of considerable extent have been formed. In these it is necessarily much slower than in lobar pneumonia, where the inflammatory products are wholly or chiefly within the alveoli and the bronchi.

What becomes of those cases (by no means few in number) which at the end of six weeks or two months have shown little or no tendency to resolve, the physical signs remaining as they were during the height of the disease? Three answers may be given: (1.) They may become tubercular. (2.) They may terminate in chronic fibroid induration. (3.) They may recover perfectly.

First, then, in regard to *tuberculosis*. Is it common for a simple broncho-pneumonia to terminate in tuberculosis. We may, I think, safely take the ground that a case of unresolved broncho-pneumonia is extremely unlikely to develop tuberculosis, if there has been beforehand no sufficient grounds for believing the patient to be tubercular.

*Secondly, fibroid induration.*—The greater the duration of the disease the more marked are the changes, and the acute process may pass into a chronic one, with the production of new connective tissue. These patients may live on indefinitely.

*Thirdly, complete recovery.*—I use the word in a clinical sense, not in an anatomical one. By recovery I understand a condition in which the lung performs its functions normally, so far as we can judge from the patient's symptoms.

That it is possible for a lung in which consolidation from broncho-pneumonia has existed for several months to return to a condition in which no changes would be apparent under the microscope, I doubt very much. Using the term in the sense defined, I believe that the greater number of these cases ultimately recover perfectly.

*Diagnosis.*—Is it possible to make a diagnosis between lobar and broncho-pneumonia, and, if possible, is this of any practical value? I answer both these questions in the affirmative. In the matter of prognosis it is of very great importance. In the vast majority of cases, the two diseases can be distinguished by the symptoms and physical signs.

*Treatment.*—I have not much faith in drugs in the management of pneumonia in children. I have tried most of those usually recommended very

extensively, and am able to speak quite positively of what they do *not* do. Quinine and the other cinchona alkaloids, I believe, have little effect in aborting the disease, shortening its course, or in reducing the temperature.

Aconite in the very beginning of lobar pneumonia I have used considerably in very small frequent doses, and I have seen enough benefit from it to encourage me to continue in its use.

The treatment I have finally settled upon can be briefly summarized in a few words: *nourishment, opium, alcohol, local applications.*

If the child be at the breast it should be kept there, care being taken that it be not nursed too frequently.

Opium I believe to be worth more in acute pneumonia than all other drugs combined. It quiets the restlessness, relieves the pain and the cough, and, perhaps more important than all, sustains the nervous system under the strain which the disease produces, and in this way seems to exercise a beneficial effect upon the inflammatory process. Of late I have used a great deal, and have come to prefer the tincture of opium and ipecac, or the liquid Dover's powder to any other preparation of opium; it may be given in drop doses at the same intervals.

Alcoholic stimulants in a large number of cases of lobar pneumonia are never needed. In broncho-pneumonia they are often required from the outset. They should be given fearlessly, but of course intelligently.

*Local applications.*—Poultices, unless *very carefully, intelligently, and conscientiously* applied, are capable of doing quite as much harm as good. Their efficiency it much increased by the addition of mustard.

To promote resolution in broncho-pneumonia in addition to the usual internal remedies employed, cod-liver oil, iron, etc., I have been in the habit of keeping up a mild counter-irritation over the chest by iodine or friction with some stimulating liniment.

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### IS THE OPERATION OF TRACHEOTOMY IN DIPHTHERITIC CROUP DANGEROUS?—WHEN SHOULD THE OPERATION BE PERFORMED?

By JOSEPH E. WINTERS, M.D., Clin. Prof. of Diseases of Children, Med. Dep. Univ. of City of New York.

From a paper published in the *Medical Record*, December 13, 1884.—*Conclusions:* (1) Tracheotomy of itself, performed with care, involves little if any danger to life. (2) Accidents during the operation generally result from want of care. (3) It prevents asphyxia, and thus gives more time for the administration of remedies, and for the system ultimately to throw off the disease. (4) It prevents laborious and rapid breathing and lessens exhaustion. (5) It allows a free supply of air, and thus assists in the cure of the original malady. (6) It is the supreme resource, and as the patient cannot be made worse by it, do not postpone it until there is but a forlorn hope even from it. (7) Persistence of the original disease, delay in the performance of the operation, and neglect after, are the causes of its failure. (8) Operate early, very slowly, deliberately, carefully, and without hurry. (9) It is never too late to operate: even though the child has stopped breathing, if life is not extinct, open the windpipe and perform artificial respiration—many children have been saved under just such conditions. (10) If strangulation is the main symptom neither age, constitutional conditions, nor complications can furnish a contra-indication to its performance. (11) It alleviates suffering. (12) It mitigates all the symptoms. (13) It obviates secondary complications. (14) It never adds one element of danger to the original disease. (15) Statistics taken collectively show that nine tenths of the cases which render the operation needful will suffocate without it. (16) Performed early it snatches from certain death fully two-fifths of all the cases. (17) No patient that dies after the operation would have lived if it had not been performed. (18) When it fails to save life the relief afforded

and the substitution for the most agonizing mode of death—strangulation—one of the least, by asthenia, are sufficient reasons to justify its performance. (19) The dictates of science, facts, and common humanity, unite in demanding it.

### THE PARASITIC ETIOLOGY OF DIPHTHERIA.

By M. PUTNAM JACOBI, M.D., Prof. of Diseases of Children in the N. Y. Post-Graduate Med. School.

From the proceedings of the *Clin. Soc.* of this School and Hospital, we take the following conclusion of a paper read by Dr. Putnam Jacobi:

The result of experiments conducted with these new bacilli is summed up by Loeffler as follows: They were found in thirteen cases of diphtheria with fibrinous exudation; they lay in the oldest part of the membrane and penetrated further toward the tissues than the other bacteria; products of the cultures of them, carried to the twenty-fifth generation, when inoculated under the skin of Guinea pigs and small birds, kill the animals, after the production of a whitish or hæmorrhagic exudation at the point of infection, and extensive subcutaneous œdema. The inner organs remain intact, as do those of diphtheritic patients. Pseudo-membranes are generated by inoculation of the trachea of rabbits, chickens, and pigeons, or of the vagina of Guinea pigs. There are then also evidences of several vascular lesions, manifested by hæmorrhagic œdema, by hæmorrhages into lymphatic glands, and effusions into the pleural cavity. The bacilli have thus the same effects on the animal organism as the diphtheric virus.

Dr. Thomas E. Satterthwaite, commenting on the experiments cited by the speaker of the evening [experiments with negative results, performed by Satterthwaite and Curtis in 1879] said that they had utterly failed, by injecting the diphtheritic deposit into irritated air-passages and by inoculation beneath the skin, to produce results which in any way differed from those which are obtained from the injection of any putrid material. As a rule abscesses were produced in animals with a residual cheesy mass. The animals emaciated but did not always die. He then exhibited a series of microscopic specimens taken from a diphtheritic larynx and showing the membrane *in situ*. He also showed sections taken from a larynx in which a diagnosis of membranous croup had been made by a well-known authority on children's diseases. He could not discern any essential difference in minute structure between the two membranes, and in this view he believed he was sustained by the general opinion of pathologists in New York. He also called attention to the old-time definition that a croupous deposit is one which reposes upon the surface, while the diphtheritic deposit is one which also infiltrates the mucous tissue of the part so as to be separated with difficulty. As a point of fact, he held that every diphtheritic membrane would at times be found tightly attached at some places and loosely at others. In Dr. Carpenter's specimen the membrane was tightly attached upon the epiglottis and larynx, but below it could be easily removed. The speaker considered that this loosening had been largely due to the action of the muciparous glands, as had been pointed out by Dr. Jacobi, the glands being absent where it still adhered. Specimens were exhibited showing how this separation was accomplished. He did not consider that the mucous membrane was materially altered where the exudation occurred. He had seen the ciliated epithelium immediately underlying the membranous deposit.

### PLEURISY IN CHILDREN.

By J. LEWIS SMITH, M.D., Clin. Prof. of Diseases of Children, Bell. Hosp. Med. Coll., New York.

From the proceedings of the *N. Y. Path. Soc.* [*Record*, Jan. 24, 1885.]—In children over the age of three years it is not difficult to diagnosticate pleurisy by the physical signs, but in patients under this age, and especially under the age of two years, it is often very difficult to discriminate by auscultation and percussion between pleurisy with effusion and pneumonia. The physical signs accompanying a pleuritic exudation in infants are such, that, if they were observed in an adult, we would unhesitatingly diagnosticate



pneumonia. In the infant, enfeebled by disease, the lungs, which are prone to atelectasis and collapse, are compressed by the liquid before there is any appreciable elevation of the chest-walls or even of the intercostal spaces, and if there be an undue prominence on the affected side in consequence of the effusion, it is compensated by the exaggerated expansion of the opposite lung, which performs the function of both. Measurements, therefore, afford us little aid in the infant. Displacement of the heart is a conclusive sign, but this we lose as an aid in diagnosis if the pleurisy be on the right side. Palpation, in order to determine the presence or absence of local fremitus, and change of position of the patient, in order to determine an increase or recession of the area of dullness if a liquid be present, are for the most part without result in the examination of infants.

In the infant, however great the effusion, it is seldom that we do not hear distinctly the respiratory sound when the ear is placed over the fluid. In the beginning of the attack the murmur may be vesicular, but as the effusion increases it becomes bronchial, and is often as distinctly bronchial and nearly as loud as in pneumonia. Even in an effusion that is large for an infant, the distance of the lung from the walls of the chest is so small that the respiratory sound is readily transmitted through the liquid, either from the bronchial tubes on the affected sides, or perhaps from the other side, so that, as a rule, we hear quite a distinct bronchial respiration when the ear is applied over the pleuritic effusion. This deceives auscultators, and leads them to think that the disease is pneumonia.

The percussion sound is, of course, dull, and nearly or quite flat, if there be much effusion. If it be very dull, approaching flatness, over a considerable part of the affected side of the chest, I have been led to regard the disease as pleurisy with effusion rather than pneumonia, whatever the other physical signs in the infant. One would suppose that the exploring needle attached to the hypodermic syringe would always afford a quick and certain means of diagnosis; but we sometimes fail to obtain liquid by the needle, when it is present, either because there are adhesions or a thick fibrinous exudation at the point of puncture, or because it has not been inserted to the proper depth. Less than half an inch will pierce the chest-wall in most instances, and I think the needle is not infrequently inserted too far.

### LARYNGEAL AND BRONCHIAL STENOSIS IN DIPHTHERITIC CROUP.

By A. JACOBI, M.D., Clin. Prof. of Diseases of Children, Coll. Phys. and Surgs., New York.

From the proceedings of the *N. Y. Path. Soc.* [*Record*, Jan. 24, 1885].—When croup descends after tracheotomy a number of the children die in a way similar to that in which they did if no operation has been performed; namely, of stenosis, but not to the same extent as when not operated upon.

This means that the stenosis of the larynx is somewhat different from stenosis of the bronchial tubes. It is true there is dyspnoea, with recession of the supra and infra-clavicular and diaphragmatic portions of the chest, but it does not obtain to the same degree. There is, besides, when there is uncomplicated laryngeal stenosis, long-drawn, slow inspiration. In the vast majority of cases in which there is *bronchial* stenosis the respiration is no longer so long-drawn, but is more frequent, and more of the character of the respiration which occurs in inflammatory disease; that is, the breathing when the membranous exudation descends is no longer that which arises from pure, uncomplicated croup, but there is a mixture of the inflammatory respiratory disease, and the children do not die alone of laryngeal stenosis, but of the complicating pulmonary congestion, bronchitis, œdema, etc. This fact can be utilized for purposes of diagnosis. In those cases, for instance, in which there is, on one day, long-drawn inspiration with croupy dyspnoea and on the next day the respirations are quite changed, the recession of the chest-walls is not quite so deep, but the respirations are more frequent and accompanied with cyanosis, it may be inferred that the membranous exudation has descended.

## CONDENSED MILK FOR BOTTLE-FED BABIES.

By BENJ. EDSON, M.D., Brooklyn, New York.

From the *Archives of Pediatrics*.—I am fully aware that writers and quasi authorities have very generally condemned this kind of milk, chiefly on account of the large amount of sugar it contains. Most of those who have admitted the value of condensed milk for infants have drawn the line between that sold in bulk and that put up in tins.

That delivered from wagons not unfrequently becomes unfit for use in less than twenty-four hours. That in tin cans will keep sweet indefinitely.

The objections to the canned condensed milk seem to be theoretical, rather than based upon the result of actual experience. In short, *experience* must be the final arbiter as to the fitness and value of any material as an article of diet.

As regards canned condensed milk, I am not aware of any instances where it has been faithfully and intelligently used and proved a failure. I do not know of any series of cases in which any constant illness or departure from health has resulted. I have yet to learn of any disease produced by its proper use, or that it fails to sustain and promote the healthy and hardy growth of the infant. I think it remains to be demonstrated that pure sugar, in the quantity used in preserving condensed milk, is in any way unwholesome for the young child.

## NIGHT TERRORS IN CHILDREN.

By W. B. ATKINSON, M.D., Instructor in Diseases of Children, Post-Graduate Course, Jeff. Med. Coll., Philadelphia.

From the *Archives of Pediatrics*.—This child is five years of age. An examination shows no signs of the disease. Her appetite is good, she digests well, her bowels are regular; in short, she appears to be in excellent health. She has what is known as "Night Terrors," an affliction which is apparently quite well known in certain families. Unfortunately, however, it is too often not understood by the parents, who endeavor by threats and chastisement to break them of what they regard as a bad habit.

Such children should be regarded as subjects for the exercise of the greatest kindness. I am firmly convinced that want of proper care and treatment of this affliction will lead in some cases to insanity more or less pronounced, to imbecility, and always proves injurious to the child's mental powers.

We often find it associated with nocturnal incontinence. Frequently the first symptom complained of is the "wetting of the bed." This incontinence of urine in most, if not all, cases, is, I believe, the result of the fright.

I am satisfied that this ailment often commences at a very early age.

In some children it is seen even as late as the age of puberty, and in such cases the subject of it will experience the most unaccountable dread of the approach of night, or of darkness, and will gladly welcome anything in the shape of a companion.

The actions of its victims are very various under an attack. One child will spring from its bed and with fearful screams rush to a place of safety, it may be to its parent's arms, it may be to a crowded room, regardless of its scanty attire or any other matters. Another will walk without uttering a sound, with eyes wide open and face as if fixed in fear, and apparently walking in its sleep, yet on reaching a supposed place of safety it will convulsively sob and clasp hold tightly of some one as if fearing pursuit. A third will in its fear cover its head with the clothing and lie quivering in dread until it falls into an uneasy slumber, from which it wakes in the morning unrefreshed and with aching head.

The causes have been supposed to be the presence of worms in the intestinal tract, especially of that form known as "seat" worms, which by reflex excitement induce this nervous affection; indigestion, as when the child has been allowed to load its stomach with trash, or even with good food in too great quantity; nervous excitement in older children, as from foolish stories

or injudicious reading; mental strain, as from too close study, or from cares beyond endurance at so early an age.

The prognosis depends greatly upon the length of time that the case has lasted, the causes when known, and the possibility of their removal, and the nerve power of the subject.

The treatment will be, as in all cases of disease in children, to follow the indications, and act accordingly. Always try to prevent an attack by insisting upon a light supper of easily digested food. Avoid all stimulants, as coffee or tea, for the evening meal. Let the child sleep in a room sufficiently lighted, that the eye may not be compelled to strain its powers in the endeavor to make out each object in the room. The child should be covered with clothing sufficient to preserve a natural warmth, yet not overburdened, thus predisposing to an attack.

Should an attack occur, soothe it in the kindest manner. Never by harsh words or blows endeavor to subdue the excited condition. It is far better for the mother or nurse to lie down by the child, and by such presence enable it to sink into slumber with a feeling of confidence and safety.

The general treatment will be in this case the exhibition of bromide of potassium, say five grains in a drachm of syrup simplex every four hours.

#### ACUTE PURULENT SYNOVITIS IN A CHILD OF TWO MONTHS.

By H. BERLIN, M.D., Chattanooga, Tenn.

From the *Southern Practitioner*, Feb. 1885.—Volkman reports nearly fifty cases of acute purulent synovitis in children. This joint affection whose etiology is still utterly unknown, occurs mostly in children under two years of age, and is not traceable to any of those diseases which are usually followed by purulent synovitis; such as small-pox, measles, scarlatina, dysentery, typhus, epidemic parotitis; even syphilis and struma may be positively excluded. It always occurs in one joint only, and generally, and most severely, in the knee; but the shoulder, elbow, hip and foot, are also subject to the affection.

Volkman gives the clinical course of the disease as follows: a perfectly healthy child is attacked suddenly with more or less fever and pain from inflammation of one of the larger joints, without known cause, traumatic or otherwise. The joint fills quickly with fluid; the soft parts around the joint show phlegmonous swelling and reddening. When this condition has existed several days an incision is made or the joint breaks open itself; in either it discharges a strong mucous synovial pus.

In cases in which the incision is made early we find the synovial fluid of the consistency of the thick discharge from the nasal membrane; of a gelatinous appearance, and mixed with thick yellow pus streaks. In later stages we find more clear pus.

We make a large incision and find the synovia much swollen, and very red; the cartilage is always intact. The synovia will often be found to have pushed its chemosed edges over the limbus of the cartilage.

In a majority of cases the course of the disease is favorable, the healing follows generally without ankylosis, and with little or no diminution of the mobility of the joint.

More frequently the copious suppuration produces sub-luxation of the knee-joint, or total luxation of the hip-joint. Volkman, in a number of the latter cases, has replaced the joint after incision and discharge of pus, and with comparatively good results.

The case which I wish to report is as follows: In July last my partner, Dr. Barkley, was called to see a child, æt. two mos., well nourished, and healthy, since birth, unexceptionable; no history of syphilis or of a scrofulous taint in either parent. The mother said the child was fretful, and she said also that it cried, as if in pain, when the left leg was touched. Dr. B. found the knee somewhat swollen; tender on pressure; leg semi-flexed; temp. a little above normal; no signs of an external injury could be detected, and parents could throw no light on the subject. Chloral hydrate was prescribed and the knee ordered to be painted with elastic colodion and iodoform. At the

expiration of three days we saw the patient together. Found the swelling much increased; knee hot; patella floating; marked fluctuation; temp. 103° F.; leg flexed at a right angle. We made a free incision on the outer aspect of the knee, a little above the upper half of the patella, and evacuated a large quantity of serum and pus. An elastic catheter was then introduced and the cavity thoroughly washed out with a bichloride solution. Then a drainage tube was put in, absorbent cotton applied and limb bandaged. For eight days the cavity was washed out through the drainage tube, at the expiration of which time suppuration ceased, tube was removed, and wound closed by a piece of gum plaster, and in a few days was completely healed up. The motion of the joint is now perfect, and no difference between it and its fellow can be detected. The child's general condition is splendid.

### CONGENITAL PHYMOSIS.

By HORACE G. WETHERILL, Trenton, N. J.

From the *Boston Med. and Surg. Jour.*, Jan. 15, 1885.—A very long prepuce, even free from constriction, I should regard as a malformation and advise its amputation. It interferes with cleanliness and induces sexual orgasm in very young children, attracting attention to the penis at a time when they should know it, simply as a urinary appendage, without other function, and is doubtless instrumental in making onanists.

Echeverria, in his famous work on epilepsy, says: "Congenital phymosis, in the case of males, renders them special prone to onanism. This malformation is not necessarily incompatible with health, though it may become a frequent source of troublesome local and general derangement."

In examining the works of many of the best authors of the later days, I find more or less a common expression of opinion in relation to this matter. Many forms of mental derangement from mania to dementia may be caused by habitual onanism, and a large proportion of the epileptic and melancholic cases we find in our asylums are results of some sexual irregularities.

That phymosis (or great elongation of the prepuce even) induces a desire to onanize, I regard as proven and axiomatic; so we can easily trace many of these various maladies to a very easily avoided cause.

To correct a phymosis, or amputate a long foreskin in infancy, is a simple operation, and should not be omitted by any, where necessary as a wholesome and cleanly measure. Circumcision also materially decreases the risk of contracting venereal diseases.

### DOES HEREDITARY SYPHILIS EXIST?

Dr. FESSENDEN N. OTIS, of New York (*Phila. Med. Times*): Mr. Hutchinson, generally conceded to be the greatest English authority on syphilis, distinctly supports the germ-theory of syphilis, and carries it to the legitimate conclusion that the disease is confined in every instance to the individual organism infected, and hence that it is incapable of being acquired or communicated through hereditary transmission; in other words, that there is no such disease as hereditary syphilis, any more than there is an hereditary small-pox, and that in every case of syphilis the disease is acquired through contact with a disease-germ of syphilis in an organism, previously free from that disease, whether it occurs in the ovum, the embryo, the foetus, the infant or in the adult. \* \* \* The mother must first acquire the disease; and it is only through the disease-germs of syphilis circulating in her organism that the product of conception can be infected before birth. \* \* \* It is undoubtedly the fact that much disease in foetal and in infantile life results from pre-existing disease the legitimate sequel of syphilis in the organism of the mother; but, that any syphilitic disease proved to be such by its power to transmit syphilis has been communicated to healthy persons, by infants conceived after the active or contagious stage of syphilis in the parents has passed, there is no well authenticated evidence to prove. And this stage, \* \* \* has been shown, by ample testimony, not to extend over a period of three or four years.

## SCROFULA AND INFANTILE SYPHILIS.

The *Weekly Review*, Jan., 1885, gives the following of Dr. Gamberini, *Jour. de Med. de Paris*: The author endeavors to demonstrate, that scrofulous lesions are, in the majority of cases, manifestations of tuberculous infection, and, moreover, that those affections called scrofulous by the old time practitioner, have a close relationship with a certain degree of syphilitic infection, chiefly hereditary.

The conclusions are: (1) There is no reason to admit a scrofulous diathesis. The lesions denominated simple cutaneous or mucous scrofulides are nothing but ordinary inflammatory processes. The majority of the malignant scrofulides are local tuberculosis. (2) They are dependent upon an infectious origin, as the syphilitic lesions. There is, however, this difference between the virus of the tuberculosis and that of syphilis, i. e., the former may exist without the human organism, and be indirectly transmitted by the atmosphere, while the latter requires a direct inoculation. (3) The two virulent principles, on favorable grounds, have the tendency, first, to produce local lesions, and afterward to become general and give rise to systemic affections of more or less gravity. (4) The contamination of the blood by the tuberculous infection may sometimes provoke pyretic reactions of great intensity, as in the case of acute general miliary tuberculosis. (5) Other times, the tuberculous infection develops slowly, in an insidious manner, causing specific lesions of the skin, subcutaneous and cellular tissues, articulations and bone. These are precisely the lesions classed by the old books as scrofulous. (6) They offer, by their aspect, pathological anatomy, evolution and multiple terminations, more analogy with tertiary syphilis. (7) When syphilis and scrofula co-exist in the same subject, the two affections follow, as a rule, each its particular evolution without influencing one another in the least.

## THE ANTI-VACCINATION OUTCRY.

In spite of the absolutely overwhelming testimony proving that vaccination, properly performed and repeated as required, is a preventive of small-pox as complete as can be desired, and that its ill effects are so rare and so slight that they do not have the weight of a feather in comparison, there are yet blind agitators who oppose and condemn this grand discovery.

One such, by name Tebb, has been writing from London to the *Times-Democrat*, and other western papers, repeating the oft-confuted statistics of the anti-vaccinationists, and dragging forward the bugaboo of vaccino-syphilis. Any such statements made in Great Britain would receive prompt contradiction on the spot. Therefore they are sent to journals thousands of miles away, and to those which are not edited by medical men.

We brand all statements to the effect that vaccination has not been efficient and protective in England as false, and we can prove our assertion by any reputable English journal. As for the nonsense of vaccino-syphilis, not one practitioner in twenty, either here or in England, ever saw a case of it.—*Med. and Surg. Rep.*, Dec. 20, 1884.

## PAINFUL MAMMA IN YOUNG GIRLS.

While not very common, yet we occasionally read of this condition. Before the Harveian Society of London, Mr. John H. Morgan, described the case of a well-made girl, aged eleven and a half years, who had suffered from severe pain in the left mamma for some time, which had become more acute lately; the gland was very little enlarged, and showed no symptoms of inflammation; but was the seat of great pain, and was very tender to the touch. The pain was continuous, with exacerbations. There was no history of injury; the catamenia had not appeared. Shortly afterward, the right mamma became affected in an exactly identical manner. Neither local nor general treatment afforded relief. After some weeks, the pain began to intermit and at length gradually disappeared. Notes were read of six other similar cases, in five of which the left, and in one the right, mamma was the seat of pain. The children were between ten and a half and twelve years old; none had

menstruated, and in none was treatment, either local or constitutional, of much benefit. It was suggested that this pain was not due to inflammation but to some developmental changes in the gland, in sympathy with changes in the ovaries and in the organs of generation.—*Med. and Surg. Rep.*, Jan. 24, 1885.

#### QUININE SUPPOSITORIES FOR CHILDREN.

Dr. R. PICK recommends the use of quinine suppositories in children as a simple and easy method of administration, and one which, in the majority of cases, is followed by evidences of rapid absorption. It is advisable, though not essential, to wash out the rectum with injections of water before the use of the suppository; when this is done, at least half an hour or an hour should elapse between the injection and the insertion of the suppository, to increase the chances of its retention. Each suppository should contain at least 15 to 20 grains of quinine. In cases where they appear to irritate the mucous membrane, and are consequently not retained, a little opium may be added to the suppository, and they should be inserted as high in the rectum as possible.

[As the juices of the rectum are alkaline, it seems to us highly improbable that quinine suppositories should act promptly—unless, indeed, a dilute sulphuric acid be added to them in the proportion of at least one drop for each grain of the salt.—ED.]—*Therapeutic Gazette*.

#### INCONTINENCE OF URINE IN CHILDHOOD.

Dr. EUSTACE SMITH, in his recent work on children, gives the following: R̄ Tr. belladon., f 3 j; potas brom., gr. x; infus. digitalis, f 3 ij; aq. q. s. ad. f 3 ss. M. This is one dose.

He adds strychnia when the affection occurs both day and night. This author finds a great tolerance of belladonna in children, and believes that it should be pushed to its toxic effect when the case does not yield readily.—*Medical Bulletin*.

#### HOW TO ADMINISTER SANTONINE.

KUECHENMEISTER has shown that lumbrici lived in a mixture of albumin, santonine, and water, but they succumbed in a few minutes to an oily mixture of santonine. Experience has proven the necessity of direct contact. Santonine powder or troches are not a good way of administration, for the santonine is then mostly absorbed in the stomach. The only rational preparation is an oily mixture which is slowly absorbed in the intestines. In any other mode it has a toxic effect with many, but given with ol. ricini is not disagreeable, and very efficient.—*Medical Bulletin*.

#### [INFANT FEEDING.

Dr. A. D. BLAKADER (*Can. Med. and Surg. Jour.*) asks for good working formulæ of foods for infants. He gives his own, in use at the dispensary, as follows: R̄ Three tablespoonfuls of fresh milk, not boiled; one tablespoonful of cream; two tablespoonfuls of lime water; four tablespoonfuls of barley water or thin gruel; one teaspoonful of sugar of milk, and a minute quantity of salt.

He objects to the use of the many proprietary preparations, especially such as may be termed milk foods, but adds, "of those prepared from Liebig's formula, Mellin's is undoubtedly the best; and I have occasionally prescribed it with good results."—*Medical Bulletin*, Jan., 1885.

#### INCONTINENCE OF URINE.

Dr. ROCHE gives tincture of cantharides to children for incontinence of urine. He claims good results in doses of five drops three times a day.—*Lancet*.—*Medical Bulletin*.

## ADDENDA.

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### THE PROTECTIVE TREATMENT OF OPEN WOUNDS.

Dr. THEODORE R. VARICK, Surg. to St. Francis Hosp., Jersey City, N. J., in a paper published in the *N. Y. Med. Jour.*, Feb. 28, 1885, says:—The question naturally arises as to what means we have at command which, while forming an absolute protection against the ingress of septic influences into an open wound, is free from the objections mentioned.

My practice is, and has been for nearly six years, immediately the larger vessels have been tied, to apply water (slightly below the boiling point) freely and continuously to the abraded surface until all oozing is stopped, the parts are thoroughly glazed, and the red line of the tissues is slightly deadened.

The effect is not only to form the protective shield before mentioned from autogenous material, which is always available, but it mitigates shock, it promotes reaction, and accelerates healing in a marked degree.

The merits I claim for the method of treatment just considered are: (1) Simplicity. (2) Availability. (3) Safety. (4) Invulnerability.

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### MALPRACTICE SUITS. . .

It has recently been decided that a suit for malpractice cannot be entertained by the court if previously a bill for services has been collected through a suit at law. The question of malpractice has been decided in the negative by the court deciding that the services must be paid for. Hence the surgeon may prevent a suit for damages by previously suing for his services.—*Indiana Med. Jour.*

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### VINEGAR IN THE TREATMENT OF BOWEL COMPLAINTS.

Dr. WM. H. VEATCH (*Indiana Med. Jour.*) recommends vinegar, alone or in combination with other remedies, for bowel complaints, in both children and adults, especially where there is a tendency to muco-purulent or muco-sanguineous discharges. In low cases of dysenteric diseases he is rather partial to the following mixture, in from teaspoonful to ounce doses every fifteen or twenty minutes. R. Chloride of sodium, 3 ii; tr. capsici, 3 ii; vinegar, 3 ii, boiling water, 3 iii. M.

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### LIGATURE OF THE RIGHT PRIMITIVE ILIAC ARTERY.

Dr. W. S. GONLEY, in the *N. Y. Med. Jour.*, Feb. 28, 1885, reports a case in which this operation was performed for diffuse aneurysm of the external iliac. Death occurred on the twenty-first day of pyæmia, due largely as he believed to the way in which the sac was managed. To the management of the sac Dr. Gonley directs special attention, and says that had he opened it freely, the chances of recovery would have been greatly increased, and that this procedure, for which we have such strong warrant, and which is in itself so simple, so philosophical, and therefore so eminently surgical, should be more insisted upon than it has been of late years.

### THE BICYCLE AND THE GENITALS

Is the title of an item in the *Medical Age* in which attention is directed to the claim made by Dr. S. A. Strahan in the *London Lancet* that when this exercise is indulged in constantly, and especially if the course is rough, leads to serious consequences affecting the perineum, prostate, and surrounding parts in a manner that leads to early impotence. The *Age* says:—If it shall ever be suspected that the danger to the genitals hinted at, are at all real, the days of the bicycle are numbered. There are considerations to which economy and even hygiene are secondary.

### PUCK'S "REALISTIC RECIPE" FOR "HOMŒOPATHIC" MEDICINE.

A grain of medicine you take  
And drop it in Superior lake;  
Mix it and stir it thoroughly,  
Then of the mixture in the sea  
Put just one drop and stir it well,  
So neither taste nor touch nor smell  
Of medicine within is found:  
Then take of sugar just a pound,  
And medicate it with one drop  
Of the aforesaid mingled slop,  
Each day three times take half a grain,  
Till you are dead or free from pain.

[The most emphatic and striking illustration of the strength of homœopathic remedies which we have heard was that given by the country doctor, namely "Shake a tomcat over Lake Erie and by the time the water gets through the St. Lawrence River into the ocean it will be strong enough to kill whales.—Ed.]

### NEEDLESS AND USELESS COUGHING.

The *Weekly Review* gives the following formula, the favorite of a physician who writes for the relief of what he calls "needless and useless coughing":  
R. Acetate of morphine, 1½ gra.; nitric acid, dilute, 1½ dra.; oxymel of squill, 6 dra; mucilage of acacia, 2½ oz.; glycerine, 2 dra.; syrup of red poppy, 2 oz. Cinnamon or rose water sufficient to make the whole equal six ounces. M. To take one or two teaspoonfuls five, six or seven times in the twenty-four hours. The coughing in pertussis may be similarly relieved.

### A LOCAL APPLICATION FOR ELONGATED UVULA.

M. MONIN (*Union Méd.*) employs the following mixture:—Hydrochlorate of morphine, 4 grains; bromide of potassium, 1 drachm; tincture of coca, 2 drachms; glycerin, 1½ oz. The back of the pharynx and the soft palate are to be painted with this solution, to relieve the cough caused by elongation of the uvula.—*N. Y. Med. Jour.*

### LOW TEMPERATURE IN DISEASE.

Extremely low temperatures are met with under several conditions: Drunkenness, with exposure, illustrated by the well-authenticated case of Renicke, in which recovery took place after a temperature of 76° F. In mania (particularly of old people), in melancholia, and in progressive paresis, temperatures as low as 74½° F. have been recorded. In injuries and diseases of the cervical part of the cord a decided reduction has been noted, although more frequently there is an elevation of temperature. The lowest rectal temperature on record is 73½° F., in a case of limited hemorrhage into the medulla. The man lived twenty-four hours after, and the temperature did not rise above 82½° F.—*Canada Medical and Surgical Journal*, November, 1884.



Dr. W. S. ELY, of Rochester, at the annual meeting of the Medical Society of the State of New York, Feb. 8, 1885, reported a case of cancer of the liver, characterized by a series of low temperatures. Six hundred and forty-nine observations were made and four hundred and sixty showed a sub-normal temperature; the highest 104° F., the lowest 91° F. The pulse bore no relation to the fluctuations of temperature. There was no evidence of collapse, nor chill, notwithstanding the low degree reached. The observations extended over a period of nearly eight months.—*Medical Record*.

#### INSANE WITNESSES.

The United States Supreme Court has decided that "a lunatic or person affected with insanity is admissible as a witness if he has sufficient understanding to apprehend the obligation of an oath, and to be capable of giving a correct account of the matters which he has seen or heard with reference to the question at issue; and whether he has that understanding is a question to be determined by the court, upon examination of the party himself and any competent witnesses who can speak to the nature and extent of his insanity."—*The College and Clinical Record*.

#### SEDATIVE COUGH MIXTURE.

The following prescription has been tested during the last four or five years and found to be much the most reliable and efficient sedative cough mixture that I [Dr. H. C. Wood] have ever used:—℞. Potass. citrat.,  $\frac{3}{4}$  j; suc. limonis., f  $\frac{3}{4}$  ij; syr. ipecac, f  $\frac{3}{4}$  ss; syrupi q. s., ad f  $\frac{3}{4}$  vj. M. S. Tablespoonful four to six times a day. When there is a good deal of cough, or any excessive susceptibility of the bowels to loosening medicine, paregoric should be added in small quantity. The ipecac must be varied according to the susceptibility of the patient's stomach. Sometimes it can be advantageously substituted by tartar emetic. Usually two or three days of such medication will establish free expectoration. Then the stimulant expectorants are required.—*Therapeutic Gazette*.

#### URÆMIA.

The pathology of uræmia reminds one of attempts to thread a needle in darkness, the distance of the point of the thread from the eye of the needle being very difficult to determine. One year we are informed on good authority that urea may be injected into the system without serious results, and the next year the direct opposite is affirmed. This is but one aspect of this many-sided subject. The chief dispute in the pathology of uræmia is as to the nature of the toxic agent. Drs. Grehant and Quinquaud have returned once more to the question, and in an experimental method (*London Lancet*). Subcutaneous injections of aqueous solutions of pure urea have been employed in gradually increasing quantities on frogs, guinea-pigs, rabbits, pigeons, and dogs. The result was constant for the different kinds of animals, and consisted in a more or less rapid death from tetanic convulsions, similar to those produced by strychnia. The most numerous experiments were performed on dogs. The toxic dose of urea in the blood was fixed with exactitude, and the influence of urea on muscular contractility was studied. Death always ensued when a dog received into its system 10 grammes of urea for every kilogramme of body weight, or in other words when a hundredth part of the body weight of urea was injected. The proportion of urea in the blood, as estimated just before or after death, was 6 grammes for every 100 grammes of blood, and this relative proportion obtained in all the other animals employed. In a case of anuria in a man the proportion was .410 per 100 grammes, and in another case of retention of urine, .278; in a case of interstitial nephritis, the patient suffering from uræmic dyspnoea, it was .210, and in a case of uræmic coma .215. Under the circumstances of the experiments all the tissues of the animals were impregnated with urea. The observers always noticed that the urea injected under the skin was never completely absorbed, even at the time of death, though death might have been delayed for ten hours.—*Medical Record*, Jan. 8, 1885.

## ADIPOSE DIARRHŒA.

This was the name given to a case by Dr. ALLEN, of Rensselaer county, who described it before the N. Y. State Medical Association. The patient was about sixty years of age. The stools were not very fluid, but contained matter looking like melted fat. There was pain at umbilicus, and borborygmi just before the stools. The patient had three or four movements a day, the odor of which was unbearable. The fæces presented bundles of fasciculi surrounded by fat; appetite variable. Pepsine and pancreatine, 33 gr. v., t. i. d., and an opiate constituted the treatment. For diet, soft-boiled rice, milk, toast, and tea. Under this treatment there was less adipose matter in the stools. There was coldness of extremities noticed to be present. The patient improved, but had a relapse from eating pork. He grew rapidly worse, and sank into a deep stupor; urine partially suppressed, and an examination showed one-quarter part sugar, one-sixth albumin, with epithelium, hyaline casts, and broken-down blood corpuscles. The patient died in coma and no autopsy was permitted.—*Med. and Surg. Rep.*, Dec. 27, 1884.

## SWEATING TO DEATH.

Such an unusual case as that which Dr. MYRTLE reports in the *Brit. Med. Jour.*, is worthy of comment. The patient, a healthy, active man, after suffering for three weeks from pain of rheumatic character, relieved by sodium-salicylate, was seized with profuse sweats, frequently of most offensive character, and lasting at times for ten hours. Atropine and ergotine both caused sudden symptoms of collapse. He improved for a time on arsenic, and the perspiration lost its fœtor. He died from exhaustion 121 days after he had first felt the flying pains. No necropsy could be obtained. Dr. Myrtle regarded the case as one of paresis of nerves supplying the sweatducts, caused by frequent exposure to cold during his employment. Dr. Braithwaite, Dr. Hutchinson, and Mr. Wheelhouse related cases of excessive sweating, which in one instance was relieved by the external application of belladonna-limiment, and in another by taking copper-sulphate. Dr. Jacob thought the intermittency of the attacks precluded a peripheral paresis, and pointed rather to the sweat-centres being affected.—*Med. and Surg. Rep.*, Dec. 27, 1884.

## GENERAL PRECAUTIONS IN THE ADMINISTRATION OF ANÆSTHETICS.

From the *Med. and Surg. Reporter*, Jan. 3, 1885.—While we are frequently taught that we must be very careful in the administration of anæsthetics, yet it is well that this caution should be constantly impressed upon our memories, hence we deem it well to reproduce the conclusions with which Dr. George Eastes concludes his paper in the *Brit. Med. Jour.*, Nov. 29, 1884. They are as follows: (1) The patient should have no meal (except in cases of extreme feebleness) for four hours beforehand, to avoid the tendency to vomiting. A little brandy or ammonia may be given with some water fifteen minutes before the operation if the patient be an adult and chloroform be selected. (2) The anæsthetist should endeavor to reassure the patient by a kind, gentle manner, which may calm an agitated heart, and induce easy respiration. (3) No tight-fitting garment or band should be left around the chest or abdomen. (4) All artificial teeth must be removed from the mouth. (5) The anæsthetist should examine the heart-sounds and pulse before the operation. This precaution may seem superfluous, in most instances, but in a few cases may put the administrator on extra guard. (6) The patient should be placed in the recumbent posture, with the head but slightly raised. This is particularly important when chloroform or any other cardiac depressor is used. (7) The anæsthetic should be applied in the manner most suitable to the vapor used. (8) The surgeon should not commence his procedure be-

fore the patient is *fully narcotized*. (9) It is a golden rule *never to give more* of the anæsthetic than is necessary for the production of sufficient anæsthesia for the operation that has to be performed. (10) Wherefore, lastly, as the work which the anæsthetist performs depends for its successful result on such a number of nicely-balanced conditions, *his whole attention*, during the few minutes of his employment, should be concentrated upon the case. He must watch the respirations, the pulse, the countenance, and the general condition of the patient.

#### DELIRIUM TREMENS.

The general rules of treatment have been well summed up by LAYCOCK, in *Brailhwaite's Retrospect*:

(1) The patient should be placed in as complete a state of muscular repose as possible; for muscular activity exhausts the nervous system. Should his delirium be of a violent kind, an anæsthetic would be a better and safer remedy than the strait-jacket. (2) All sensational stimuli should be removed, and all emotions as far as possible prevented. (3) Food of a suitable kind should be carefully given from time to time, no alcoholic stimuli of any kind being administered, unless specially indicated. (4) When there is a tendency to diaphoresis it should be encouraged as an eliminatory process. (5) The surface, and especially the feet, should be kept comfortably warm. (6) An experienced nurse should attend the patient.

To these rules, Dr. E. P. Hurd, *Therapeutic Gazette*, Jan. 15, 1885, adds:—as medicinal measures, the judicious administration of morphia hypodermically, and the capsicum and chloral combination which are, I am persuaded, the best means of combating the restless, sleepless irritability whose persistency renders this disease so formidable and dangerous.

#### THE ERADICATION OF SYPHILIS.

M. P. Diday, in an article upon the excision of the chancre, reaches the following conclusion: If the vessels and lymphatic glands are healthy, we may eradicate syphilis by removing the chancre; but it is necessary to remove all of the tissues which are affected. This operation is possible when the chancre is situated on the lips of the vulva, on the scrotum, and on the prepuce. At these points it may be entirely removed. Upon the glands it is impossible. Cauterization cannot be relied upon, since it does not entirely destroy, and this is an indispensable condition for success.—*Annales de Dermatologie et de Syphiligraphie*, 25th Sept., 1884.—*The Polyclinic*, Dec. 15, 1884.

#### TARDY CONSTITUTIONAL SYPHILIS.

From the *N. Y. Med. Jour.*, Jan. 24, 1885.—Dr. L. B. Bangs, N. Y. Clin. Soc., related the case of a man who had a sore on the pubic region in 1872, which healed in a month and was followed by no further manifestations until 1881, when a lump as large as a hazel-nut appeared just over the episternal notch. During the following winter the patient was subjected to hardships and lost strength; at the same time the lump increased in size and became red and painful. A traveling physician opened it and cauterized it, but only a little discharge took place. In a short time a like growth appeared upon the clavicle, became red and painful, discharged, and speedily closed. The patient was now treated for syphilis, and took a Turkish bath every day for four months, but his debility increased. In 1883 he was still growing feebler, and had ulceration of the throat, when he presented himself to another physician, who diagnosticated syphilis, gave mercury in tonic doses, and effected a cure in four weeks.

The peculiar features in the case were the absence of all symptoms during the nine years that followed the initial lesion, and the fact that the scars left by the growths were not circular, but linear.

### AFFECTIONS OF THE EAR INFLUENCED BY, OR DEPENDENT ON, MALARIA AND DEFECTIVE DRAINAGE.

Dr. OREN D POMEROY in the *Medical Record*, January 31, 1885:—To differentiate, then, between malarial ear symptoms on the one hand, and those dependent on the exhibition of quinine on the other, will present one of the difficulties of the problem before us. Perhaps the earliest and best account of malarial ear affection may be found in the *Monatschrift für Ohrenheilkunde*, No. 11, 1871 (Green's reference and extract), by Weber-Liel. He describes two forms of ear disease, dependent, as he thought, upon malarial poisoning; one an inflammatory affection, which he denominated otitis intermittens; the other a non-inflammatory affection, which he described as otalgia intermittens.

Professor Voltolini, in the *Monatsch. f. Ohrenheilk.*, May to July, 1878 (Hotz's reference and extract), publishes similar observations, but lays greater stress upon the neuralgic symptoms, calling the affection otalgia intermittens. Hotz again quotes Weber-Liel, in the *Deutsche Zeitschr. f. Prakt. Med.*, 1877, as follows: "Since I first described the otitis intermittens, I have observed a great many cases of acute aural inflammation which belonged to this class, and which, when treated as intermittent otitis, were so speedily cured that I have no hesitation in saying that a great number of acute otitides especially those occurring in spring and autumn, are caused by malarial agencies."

After giving with considerable detail the cases reported by several observers, Dr. Pomeroy continues:—

With a view of determining the opinion of aurists on this subject, I have addressed notes to about thirty-six prominent aural surgeons in this country and Canada, twenty-eight of whom have replied.

Extracts from these replies were then read, after which the author says:—In conclusion, I will simply say that so far as I have been able to study this subject, I am inclined to the belief generally obtaining in the replies from aural surgeons herewith read, that is, that malarial and unhygienic influences from bad house-drainage exert a modifying influence on ear affections, which are not necessarily peculiar in their manifestations, and not those opinions entertained by Weber-Liel, Voltolini, and Hotz.

### SMALL-POX.

From the proceedings of the Illinois State Board of Health (*Jour. Amer. Med. Ass'n*, Jan. 10, 1885).—Dr. Rauch, the secretary of the Illinois State Board has advanced the following proposition as having been demonstrated by the operations of the Immigrant Inspection Service of the National Board of Health:

1. The immigrant is a prime factor in the origin and continuation of small-pox in the United States, on the one hand, even if protected himself, often being the bearer of the contagion in clothing and other effects; and on the other, if unprotected, frequently becoming the victim to the disease and propagating it to others.

2. Local efforts and expedients, either by States or municipalities, are inadequate to the control of small-pox in any given community or commonwealth so long as the contagion and material for the propagation of the contagion, continue to be replenished by repeated accessions of unprotected or improperly protected immigrants.

3. "A cautious sanitary surveillance of immigrant travel from the port of arrival to the point of ultimate destination, such surveillance to consist of repeated inspection, vaccination of all unprotected, systematic observation of suspicious sickness, prompt removal and isolation of small-pox or other contagious cases, disinfection of baggage, clothing, cars, etc., is essential to supplement whatever preventive measures can be secured before embarkation, during the voyage or at the port of arrival."

These propositions are considered separately, and proven to be true. They contain both the object that has inspired the actions of the Board, and also the result of such action.

# QUARTERLY EPITOME

OF

## AMERICAN PRACTICAL MEDICINE AND SURGERY.

WESLEY M. CARPENTER, M. D., Editor.

The transaction, which, during the last quarter, startled the medical profession most profoundly, was the effort of a select coterie, prominent chiefly on account of their dotage, to tarnish the character of Dr. Fordyce Barker.

The attempt was so childish, bold, imprudent, and uncalled for, and so aroused the indignation of respectable people in general, throughout this country, that it will be regarded as a noteworthy event in the history of American medicine. The vindication of Dr. Barker by his brethren was as emphatic and overwhelming as it was deserved, and we fully endorse the following from the editorial pen of the *Texas Courier-Record of Med.* "The recent attempt on the part of certain envious Academicians in New York to crucify their venerable President, awakens a sentiment in the medical profession of America of a very mixed and uncommon sort. It is one of mingled regret, surprise and indignation; while the failure of the prosecution and the exoneration of the accused by the unanimous verdict of the court medical, awakens a sense of pure and unadulterated joy—we may say, exultation."

It is strange, surprisingly strange, in the flood of light with which we are now surrounded concerning the liability—one which cannot be foreseen—of chloroform to cause instant death when inhaled, that medical men, who wish to be recognized as physicians abreast with the advancements in their profession, continue to administer this general anæsthetic for the mere purpose of facilitating diagnosis or for preparing a patient for a surgical operation.

To continue to use chloroform by inhalation, on the ground that accidents will not occur when administered with proper precautions, is culpable if not criminal, viewed in the light of the numerous fatal results which have been recorded.

It would not be extreme if the use of chloroform to produce general anæsthesia was prohibited by law, a law having a penalty equivalent to that for manslaughter. An exception might be made, possibly, for obstetric practice, but even here it has caused death in several cases in which its administration was conducted with the greatest care.

The question, what is cancer? is one that has engaged attention ever since the disease received its name. Is it a local or is it a constitutional affection? Is it influenced by heredity? What are its essential morphological appearances? These are some of the questions which have been asked and they received a great variety of answers.

Mr. W. S. Savory of London, in the Bradshaw Lecture, on the Pathology of Cancer directs attention especially to the definitions which have been given to the term "constitutional." The senses in which it has been used have varied, the essential agreement being that cancer must be something more than a disease, which affects the tissues locally, because of its certainty of recurrence, its hereditability, its power of infecting the system, etc. The conclusion reached, concerning the term constitutional, is that it does not possess "any precise or definite signification for us," and

still further the distinguished writer hints that, when critically examined, the grounds upon which the various forms of belief are based are inadequate to explain the exact significance of the word and the nature of the disease.

Moreover, the signs usually brought forward to prove that cancer is "an affection of the system" are not, in Mr. Savory's opinion, the "attributes of cancer in the earlier stages of its history." The writer makes a distinction between the mode of origin and the character which a disease presents at an advanced stage of its progress, regarding this as of fundamental importance, and believes that even a disease which *early* may be recognized as constitutional, may in the *earliest* stage be considered local.

But dropping the terms local and constitutional the writer approaches the study of cancer from another point of view—namely—the nature and vital attributes of its so-called cells or of the formless plasm out of which they come. He concludes that "those tumors which form the most malignant cancers are constituted of quite rudimentary elements, those of the lowest grades of development, but being on a level with the embryonic stage of normal structures." On this basis he believes that the varieties and peculiar features of what are known as malignant growths can be easily explained.

William Braithwaite, M. D., the founder of *The Retrospect of Medicine*, died January 31, 1885, in the seventy-eighth year of his age. He began the practice of medicine in Leeds England, where he resided at the time of his death.

In 1840 he began the medical publication, which has been identified with his name, and which has met with a success unparalleled in the history of medical journalism. There are but

few practitioners in the United States, not one of the older members of the profession, we feel safe in saying, who has not seen it, read it, and treasured it, as the most worthy compend of medicine published. The *Retrospect* has now reached its ninetieth volume, and stands as an imperishable monument to the memory of one of the most accomplished physicians England has ever produced.

Dr. James Braithwaite, his son, has for many years carried the burthen of the labor expended on the journal, and the *Retrospect* will now be under his editorial charge with the assistance of Dr. A. G. Barre, of the Leeds General Infirmary, and an able corps of collaborators. There will be no special change in the general features of the *Retrospect*, and it will continue to merit the generous favor with which it has always been received.

Our highly esteemed contemporary *The Medical Age* appears with a neat new dress and a change in arrangement of its reading matter which will meet with general approval.

"*The Albany Medical Annals*" the Medical Annals of former days, appears with burnished armor. Albany has a noteworthy record on cold weather, but the thermometer must go to the bottom if it contemplates parting with the Annals.

Our brethren of the South-west, whose lone star leads us into the broad domain of Texas, have a new internal arrangement for one of the raciest medical journals published. The house-warming tendered the *Med. and Surg. Reporter* was an event not to be soon forgotten. *The Texas Courier-Record of Medicine* is wide awake.

*The Therapeutic Gazette* begins the year under new editorial management

by Horatio C. Wood, M.D., and Robert Meade Smith, M.D., of Philadelphia. The policy of the journal is set forth in the salutatory, and the profession may expect a purely scientific journal conducted with marked ability.

The accomplished editor of *Gaillard's Medical Journal*, Dr. Edwin Samuel Gaillard, died Feb. 2, 1885. He was a veteran in medical journalism, and his labor was characterized by uncompromising adherence to professional integrity and denouncement of charlatanism in every form.

We are pleased to announce that his successor will be Dr. P. Brynberg Porter of this city, who is well qualified to maintain the high order of this publication.

#### BOOK NOTICES.

**THE PRINCIPLES AND PRACTICE OF GYNÆCOLOGY.** By Thomas Addis. Emmet, M.D., LL.D., Surg. to the Woman's Hosp. of the State of N. Y. Third edition, thoroughly revised. 150 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1884.

It frequently occurs that the editions of a book, which follow the original publication are merely the first with trifling modifications or additions, made to render the title page and the announcement attractive. Not the least impression of this kind will be made upon the mind of him who reads the present edition of Dr. Emmet's great work. To be sure, much of the first edition has been retained, but this has been carefully pruned and grafted so that it looks like a new tree.

The immense resources which the distinguished author possesses in operative procedures has enabled him to draw fresh supplies for each edition, and to these have been added in the third, chapters on prolapse of the vaginal walls, lacerations at the vaginal outlet and through the sphincter ani and rectum, removal of the uterus

for malignant disease, diseases of the Fallopian tubes, and of the urethra, and the surgical treatment of fibrous tumors.

The distinguishing feature, however, of the present edition is the new operation for restoration of the posterior vaginal wall, in cases of "so-called rupture of the perineum."

The views of the author seem to be clear in his own mind, but it must be acknowledged that they have not been communicated in his description in such a manner as will permit of their ready application by others.

That he should ignore, substantially, the time-honored influence of the "perineal body" in supporting the pelvic organs in their normal position has already called down upon him a shower of adverse criticism, which he will bear patiently until the *art* of the operative procedure which he describes shall have been fully understood by all. To see it performed by Emmet, and to read how it should be performed, are entirely different, and its full value will probably not be appreciated until the former has been experienced.

The reader, however, who will consult Dr. Emmet's views, as expressed in former editions of his book and in his writings elsewhere, will discover that this is not a new position, for he has not at any time avowed himself as an advocate of the theory that the perineal body gives the chief support to the super-imposed pelvic organs.

The honest convictions of the author are expressed in words the meaning of which are unmistakable, and his forcible statement concerning the transmission of septic influences, under certain circumstances, cannot fail to *make* an impression, if not to carry conviction to the mind of the reader. He says that the man who would go to an operation just after he has been exposed to such influences "is morally as responsible for the death of the

patient as if he were to put a bullet through her skull."

The clinical picture of cellulitis, and the important part which it plays in the etiology of pelvic affections stands out as boldly as ever, and is one of the contributions which will render the fame of Dr. Emmet lasting. To be fully appreciated this great work must be studied and not merely read. He who studies it will be rewarded amply for the time expended.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. Thirty-fifth Annual Session. Vol. XVI. 1884. Published by the Society. Philadelphia: Collins, Printer.

The present volume is an unusually interesting one, and contains the business proceedings; the address of the President, with the addresses in Hygiene, in Mental Disorders, in Medicine, in Obstetrics, in Ophthalmology, and in Surgery; the miscellaneous papers, and reports from County Medical Societies, followed by the lists of officers and members of the State and County medical societies.

The mechanical part of the work is admirable. The addresses are exceptionally good, and some of them have received wide circulation in medical journals. The reports from County Medical Societies constitute a commendable features of the work of the Society, and one worthy of being copied. We congratulate our Keystone brethren on the success of their medical organizations. The handiwork of the efficient Permanent Secretary is apparent in the orderly arrangement of the material of which the volume is composed.

A MANUAL OF BANDAGING. Adapted for Self-instruction. By C. Henri Leonard, A.M., M.D., Prof. of the Med. and Surg. Diseases of Women, Michigan Coll. of Medicine, etc., etc. With 139 Engravings. Second edition, revised and enlarged. The

Illustrated Medical Journal Co., Detroit. Price, \$1.50, post paid.

This is a very complete book of 156 pp., in XIII chapters, devoted to the following subjects:—Cataplasmata, Charpie and Cotton Wool, Compresses, Bandages in general, Classification of Bandages, Bandages of the Head, of the Neck, of the Upper Extremity, of the Body, of the Lower Extremity, Immovable Dressings, Strappings and Knots. The descriptions are concise and clear, and the illustrations are distinct and intelligent. The whole is well adapted to self-instruction.

THE DIAGNOSIS AND TREATMENT OF CHRONIC NASAL CATARRH. By George M. Lefferts, M.D., Prof. of Laryngology and Diseases of the Throat, in the Coll. of Phys. and Surgs., New York, etc., etc. St. Louis: Lambert & Co. 1884.

This monograph consists of three clinical lectures published originally in the *Medical News*, of Philadelphia, and the *American Clinical Lectures*. I. Examination. II. Diagnosis. III. Treatment. The work is fully illustrated, and places valuable material in a convenient form for reference.

MEMOIR ON THE NATURE OF DIPHTHERIA. Drs. H. C. Wood and H. Formad of Philadelphia. Appendix A, Report of the National Board of Health for 1883.

The original work which forms the basis of this memoir was undertaken and presented under the auspices of the National Board of Health, and as published is divided into five chapters. The work is illustrated, but not satisfactorily, as is apt to be the case in this order of printing. The memoir possesses special value at the present time because the results of the researches here spread out differ from those recently published by Loeffler who claims that he has discovered the micro-organism which causes diphtheria. It is worthy of careful study.



## PUBLISHER'S DEPARTMENT.

### NEWS AND MISCELLANY.

**VALUE OF THE MICROSCOPE AS AN AID IN DIAGNOSIS.**—Dr. George R. Elliott's account of the microscopical examination of specimens removed from General Grant's throat appeared in the *Medical Record* of March 14, from which the following is an abstract:

"By way of summary, then, the more or less lobulated appearance of the epithelial mass; the actual existence of some 'cell-nests'; the great diversity in the shape of the cell elements; the marked evidences of epithelial proliferation, and the peculiar appearance of the stroma, warrant the diagnosis of epithelioma of the squamous variety. This conclusion has been arrived at, after the greatest possible care had been taken to exclude all possibilities of error; after an exhaustive study of every detail, with a knowledge of the clinical history of the case, and this, too, with a mind anxious only to find microscopical evidence that the disease was of a benign or innocent nature.

In conclusion I may say that this case illustrates the peculiar value of the microscope as an aid in diagnosis, since without it a positive conclusion could not have been reached upon the exact nature of the disease. In many instances, it is true, we cannot be so positive, either because we are not fortunate enough to obtain the particular part of the diseased tissue that shows the characteristic structure upon which the diagnosis is made with the microscope, or it may be that the disease is at that early stage when it exhibits nothing that is pathognomonic."

**COCAINE IN CASES OF FEEBLE HEART.**—At a late meeting of the College of Physicians of Philadelphia, Professor DaCosta called attention to the hypodermic use of cocaine in cases of cardiac failure and weak heart. He had found that doses of one-third to two-thirds of a grain strengthened the cardiac systole, and, as shown by the sphygmograph, the pulse became fuller, stronger, and a little slower. Given in this way it was observed that the pupils became dilated, but the effect upon sensibility of mucous membranes was only slight, and not com-

parable to those following its local employment. Injected into the skin it produced a wale which was insensible, but when thrown under the skin no local anesthesia was produced.—*College and Clinical Record.*

**LOW TEMPERATURE IN PNEUMONIA.**—The danger attendant upon inflammatory disease is generally regarded as existing in proportion to the elevation of bodily temperature, and usually the prognosis is regarded as favorable in cases in which the thermometer registers low on the scale. That this rule is not without its exceptions is attested by a report of cases by Dr. Janeway to the New York Clinical Society. These cases were three of pneumonia, in which the temperature did not exceed 100° F., although there was well-marked consolidation at the base of one lung and some signs of inflammation on the other side. Dr. Janeway, thought this low temperature usually foreboded evil. The three cases which he reported terminated fatally. With this low temperature co-existing with well-marked local signs of pneumonia, the disease was formerly classed as asthenic pneumonia.

While, in the discussion which followed Dr. Janeway's paper, several cases of low temperature in pneumonia were reported as terminating favorably, the fact of its existence may be regarded as sufficient to place the medical attendant on the alert.—*Medical News.*

**TREATMENT OF CHOLERA.**—By the researches of Dr. Koch, it is now known that acids are most useful to kill the cholera microbe, and have been successfully employed by the profession in Europe.

Dr. Chas. Gatchell, Chicago, in his "Treatment of Cholera," says: "As it is known that the cholera microbe does not flourish in acid solutions, it would be well to slightly acidulate the drinking water. This may be done by adding to each glass of water half a teaspoonful of Hosford's Acid Phosphate. This will not only render the water of an acid reaction, but also

render boiled water more agreeable to the taste. It may be sweetened if desired. The Acid Phosphate, taken as recommended, will also tend to invigorate the system and correct debility, thus giving increased power of resistance to disease. It is the acid of the system, a product of the gastric functions, and hence, will not create that disturbance liable to follow the use of mineral acids."

The following case is reported from Bangkok, Siam, and may be relied on as authentic: About three months ago a native was attacked with cholera. An American Missionary attended him, and administered all medicines he could, but at last the man was so far gone that they gave up all hopes of recovery, and would do no more. Relatives of the patient begging the doctor not to give him up as lost, the doctor thought of Horsford's Acid Phosphate. After the second dose the patient commenced to revive, and in six hours after, he was pronounced out of danger.—*Medical Times*.

**HEALTH RESORTS FOR INVALIDS.**—W. Thornton Parker, M.D., Surgeon U. S. Army, in an elaborate treatise on the climate of New Mexico and the far West, when giving advice to invalids he writes: "A preparation of coca wine, made by Theodore Metcalf & Co., of Boston, is the best single preparation for travelers that I know of. This preparation of wine of coca of Metcalf's is desirable for the invalid after reaching either Colorado or New Mexico. Coffee and tea are too stimulating, and exert an injurious influence on the nervous system in these high altitudes. Coca is desirable as a sedative to the nervous system, and at the same time a delicious invigorating tonic. Constipation is very apt to trouble the traveler not only on the journey, but after his arrival in the new country and some easily taken cathartic, like Brewer's tartrate of soda, in effervescing granules, or the new and excellent cathartic also manufactured by Metcalf & Co., of Boston—Rhamnus Frangula—will be found very valuable, and will obviate those distressing headaches and general malaise which a long journey is apt to induce. The traveler needs few medicines besides those mentioned."—*The Archives of Medicine*.

**INFANTS FOOD.**—A recent analysis of Mellin's Food for Infants and Invalids by Mr. G. W. Wigner, the President of the Society of Public Analysts of England, throws considerable light, not only on the composition, but on the physiological action of this popular preparation. It appears that it contains nearly 87 per cent. of dextrine, maltose, etc., soluble in cold water.

As Professor Wigner points out, it is not a mere starch or sugar food, but a soluble preparation, containing those nitrogenous and phosphatic principles which contribute largely to the growth of bone and tissue in young children. Being thoroughly malted, it is not only readily digestible itself, but actually assists in the digestion of milk and other foods with which it is mixed. It must of necessity be of great value in the case of feeble infants who cannot digest ordinary starchy food. Mr. Wigner's analysis has evidently been performed with great care, and is of much interest. Mellin's Food has established an enviable reputation, second to none in preparations of its kind.—*British Medical Journal*.

**SYPHILITIC NEURALGIA.**—Dr. J. H. DeWolf, of Balt., Md., says: This case is somewhat unusual. The woman suffered from Syphilitic Neuralgia, and so great was the pain that it took one-half grain twice daily of morphine hypodermically, to relieve her pain. Opium in the various forms that I tried, caused constipation, in such large doses. I was afraid that she would become accustomed to morphia, so I determined to give Papine a trial. I found that it did not constipate the bowels, and that it was preferable to ordinary preparations of opium in many respects. Patient recovered as rapidly as could be expected.—*Med. Gazette*.

**NERVOUS PROSTRATION AND BRAIN TROUBLES.**—L. Andrews, M. D., of Oswego Co., N. Y., says: For some time past I have used Celerina in my practice. I used it first in a case of *nervous prostration* and found it a success when other remedies failed. Would recommend it in all nervous diseases or brain troubles. I find it soothing, and permanent in its effects, and in many cases of nervous debility and loss of will power in certain directions, produced by indiscretions, &c., I consider it an invaluable remedy.—*Clinical Record*.

**QUARTERLY EPITOME**  
**OF AMERICAN**  
**PRACTICAL MEDICINE AND SURGERY;**  
**Supplementary**  
**TO**  
**BRAITHWAITE'S RETROSPECT;**

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN  
THE MEDICAL SCIENCES, ABSTRACTED FROM THE CURRENT MEDICAL JOURNALS  
OF THE UNITED STATES AND CANADA.

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# PRACTICAL MEDICINE.

## DISEASES AFFECTING THE SYSTEM GENERALLY.

### THE GERM THEORY OF DISEASE, ITS PRESENT STATUS AND PRACTICAL APPLICATIONS.

By F. W. LANGDON, M.D., Prof. of Descriptive and Surgical Anatomy, Miami Med. Coll., Cincinnati, O.

In a valedictory address delivered at the annual commencement and published in the *Cincinnati Lancet and Clinic*, March 21, 1885, Dr. Langdon, says:—The question, then, "What are disease-germs?" resolves itself into the question, "What are bacteria?" We may condense the volumes that have been written upon this question into the statement, that bacteria are vegetable organisms, each consisting of a single cell (or elementary particle) microscopic in size, usually colorless, and capable of rapid and enormous increase in numbers under favorable circumstances, by means of reproduction by fission (simply breaking in two) or by means of spores produced in their interior.

Notwithstanding the fact, that bacteria are the smallest of living things, they are, in every sense of the word, *adult* organisms, hence the word "germs" applied to them is a misnomer, as implying an embryonic condition. Being of a strictly *vegetable* nature, the popular term *animalculæ* is likewise radically incorrect.

Physically, under a magnifying power of from 500 to 2,000 diameters, they may be seen to be of *three chief forms*, namely—*globular*, *cylindrical*, and *spiral*,—a globular bacterium is called a *micrococcus*; a cylindrical one, a *bacillus*; a spiral one, a *spirillum*.

As regards their distribution, they are found wherever organic matter exists in process of decay; and decay begins where life ends if bacteria be not excluded. They exist in the soil upon which we walk, the air we breathe, the water we drink and the food we eat; in short, wherever, on the surface of the earth the temperature is not constantly below the freezing or above the boiling point, living bacteria may be found. Their spores will survive under conditions that will kill every other living being.

A distinguished botanist (Sir Joseph Hooker I believe) has said, "A weed is a plant of which we do not know the uses." Applying this principle of classification to the bacteria, we may divide them, from an economic standpoint, into three classes, namely: (1) Beneficial, including those of putrefaction and fermentation already referred to. (2) Negative, or those whose action is unknown—the *weeds*, so to speak, of bacterial life,—and constituting, at present, by far the largest class. (3) Injurious, also called pathogenic or disease-producing bacteria.

To this latter class then, let us devote a few moments attention, and now enter the domain of dispute.

So far as physical appearances are concerned, the bacteria of disease differ in no marked manner from those of putrefaction, fermentation, etc., occurring as they do in all of the three chief forms of globules, cylinders and spirals; so that, for purposes of study, they can only be separated by what are technically termed culture and inoculation experiments, conducted by

experts skilled in the use of the microscope and familiar with the clinical phenomena and post-mortem appearances, caused by disease.

Without entering into the details of this interesting subject, it is sufficient to state here, that, by means of these experiments various kinds of bacteria are isolated, cultivated, inoculated and *proven to cause, each a particular disease and no other.*

What diseases are they? Amongst the diseases thus proven, beyond a doubt, to depend upon the presence of special bacteria are: Anthrax or splenic fever, tuberculosis or consumption, relapsing fever and glanders.

Others, whose bacterial origin is *extremely probable*, but still imperfectly established, are: Cholera, typhoid fever, small-pox, vaccine disease, measles, diphtheria, leprosy, septicæmia and some others.

Now, I would not have you suppose that the bacterial causation of disease is universally accepted. Suffice it to say, that, decided as questions of fact are in courts of law, namely, upon the *weight of the evidence*, the *question* as to whether certain bacteria are the essential cause of certain definite diseases in man and other animals, must be decided in the *affirmative!* as having the support of by far the greater number of competent pathologists and mycologists who are recognized authorities! The question as to *how* they act does not affect the decision.

The question now arises—if the bacteria of a given disease, tuberculosis, for instance, are almost universally present, *why* do some contract the disease whilst others escape. It is evident that *something more* than the mere presence of the bacteria is involved in the production of infectious disease.

What is this something? *We do not know!*—it is the X of the algebraic problem, which remains unsolved!

Like many other things of which we know little or nothing, however, it has several names. We call it vitality, idiosyncrasy, etc.; in effect it is the *resisting power* of living organic matter to the *agents whose duty it is to reduce it partially or wholly to inorganic matter.*

We may consider then, as the *two factors* in the problem of infectious disease: (1) diminished resisting power; (2) the bacteria.

In other words, the *soil* and the *seed*; either being inoperative without the other. To put the problem another way: It is as manifest that pathogenic bacteria, coming in accidental contact with *healthy* tissues, will fail to multiply in sufficient numbers to cause *disease*, as that *corn* sprinkled upon a *bouldered street* will fail to produce a *corn crop.*

But, we hear it argued, "here is a man in *perfect health*, stricken down with cholera, or small-pox, or some other infectious disease"—how do we account for this? Inquire into that man's history for a week, a month or perhaps for years—has he inherited a feeble organization? has he been underfed or overworked? is he dissipated in his habits? have business or domestic affairs weighed too heavily on his mind? does he sleep in a well-ventilated room?—in short, are his *tissues*, to use a commercial phrase, "*below par*" from any cause whatsoever?

*The cases of infectious disease in which some preceding anti-hygienic influences cannot be traced are certainly rare if not unknown.* What, then, is the most practical lesson we may learn from our present knowledge of the causes of infectious disease—simply this! *The preservation of the normal integrity of the tissues is equivalent to depriving the bacteria of a soil in which they can multiply to a dangerous extent.* How may this be effected? In a word, by hygiene, possibly by vaccination; the future possibilities of the more extended application of this principle are great.

Of all the routes by which the cause of infectious disease reaches any community, none perhaps are more important and less regarded than the water-supply. How often do we hear gravely discussed the supposed dangers of sewer-gas, which has never yet been proven to cause a single disease, —while at the same time we lay pipes to convey to our houses the sewage itself—not only of a large portion of this city, but of some 200 or more towns on the Ohio above. True, it is diluted more or less with Ohio River water, but the dilution grows uncomfortably small during low water, and the prevalence of various diseases increases in an inverse ratio.

How does the sewage cause disease?—it *conveys the bacteria contained in the refuse from thousands of sick-rooms!* Do the inhabitants of unsewered districts possess any marked advantage in this respect? No! since their sources of water supply are always liable to contamination by surface drainage; and too frequently are the well, the cistern, and the cesspool in intimate relation; it is a notorious fact, also, that certain diseases of the class we are considering are relatively more prevalent in unsewered suburbs and small country towns than in the larger cities.

The water supply then, may be regarded as one frequent source of infection.

A second source is the milk; this may be a source of infection by reason of the water with which it is adulterated—or in which the vessels containing it are washed; or it may be a product of tuberculous cows.

As we cannot well watch all sources of infection by fluids, what may we do to protect ourselves against them?

Barrels of ink, and tons of printed matter have been expended on the subject of antiseptics or bacteria-destroyers; and the merits of carbolic acid, permanganate of potassium, bi-chloride of mercury, etc., are discussed at great length by a multitude of writers.

Much of this literature and the experiments on which it is based, are extremely interesting from a scientific standpoint, but neither is so practically important to the general public, as the knowledge, that *hot water*,—plain, simple, old fashioned *boiling water*,—is, without exception, the *most effective, most harmless, and cheapest* of all the antiseptics we possess. On this fact all mycologists are agreed.

The most effective weapons then, with which we may resist the onset of infectious diseases are:—(1) Hygiene, which renders unproductive the *soil*. (2) Heat, which destroys the *seed*.

The idea that infectious disease will ever cease to exist is, of course, Utopian. It is a well-known fact however, that these diseases are, in themselves, self-limited,—that is to say, the bacteria cease to multiply after a time and favorable cases recover spontaneously within a definite period.

### DISINFECTANTS AND DISEASE GERMS.

From the preliminary report of the committee on disinfectants of the *American Public Health Association*:—The object of *disinfection* is to prevent the extension of infectious diseases by destroying the specific infectious material which gives rise to them. This is accomplished by the use of *disinfectants*.

There can be no partial disinfection of such material; either its infecting power is destroyed or it is not. It has been proved for several kinds of infectious material that its specific infecting power is due to the presence of living microorganisms, known in a general way as “disease germs;” and practical sanitation is now based upon the belief that the infecting agents in all kinds of infectious material are of this nature. Disinfection, therefore, consists essentially in the destruction of disease germs.

Popularly, the term disinfection is used in a much broader sense. Any chemical agent which destroys or masks bad odors, or which arrests putrefactive decomposition, is spoken of as a disinfectant, and in the absence of any infectious disease it is common to speak of disinfecting a foul cesspool, or bad-smelling stable, or privy-vault.

This popular use of the term has led to much misapprehension, and the agents which have been found to destroy bad odors—*deodorizers*—or to arrest putrefactive decomposition—*antiseptics*—have been confidently recommended and extensively used for the destruction of disease germs in the excreta of patients with cholera, typhoid fever, etc.

The injurious consequences which are likely to result from such misapprehension and misuse of the word disinfectant will be appreciated when it is known that:

*Recent researches have demonstrated that many of the agents which have been found useful as deodorizers, or as antiseptics, are entirely without value for the destruction of disease germs.*

This is true, for example, as regards the sulphate of iron or copperas, a salt which has been extensively used with the idea that it is a valuable disinfectant. As a matter of fact, sulphate of iron in saturated solution *does not* destroy the vitality of disease germs, or the infecting power of material containing them. This salt is, nevertheless, a very valuable antiseptic, and its low price makes it one of the most available agents for the arrest of putrefactive decomposition in privy vaults, etc.

*Antiseptic agents also exercise a restraining influence upon the development of disease germs, and their use during epidemics is to be recommended, when masses of organic material in the vicinity of human habitations cannot be completely destroyed, or removed, or disinfected.*

While an antiseptic agent is not necessarily a disinfectant, all disinfectants are antiseptics.

*A large number of the proprietary "disinfectants," so called, which are in the market, are simply deodorizers or antiseptics, of greater or less value, and are entirely untrustworthy for disinfecting purposes.*

Antiseptics are to be used at all times when it is impracticable to remove filth from the vicinity of human habitations, but they are a poor substitute for cleanliness.

During the prevalence of epidemic diseases, such as yellow fever, typhoid fever, and cholera, it is better to use, in privy-vaults, cesspools, etc., those antiseptics which are also disinfectants—i. e., germicides; and when the contents of such receptacles are known to be infected this becomes imperative.

*In the sick-room we have disease germs at an advantage, for we know where to find them as well as how to kill them.*

Having this knowledge, not to apply it would be criminal negligence, for our efforts to restrict the extension of infectious diseases must depend largely upon the proper use of disinfectants in the sick-room.

**GENERAL DIRECTIONS.**—*Disinfection of Excreta, etc.*—The infectious character of the dejections of patients suffering from cholera and from typhoid fever is well established; and this is true of mild cases and of the earliest stages of these diseases as well as of severe and fatal cases. It is probable that epidemic dysentery, tuberculosis, and perhaps diphtheria, yellow fever, scarlet fever, and typhus fever may also be transmitted by means of the alvine discharges of the sick. It is therefore of the first importance that these should be *disinfected*. In cholera, diphtheria, yellow fever, and scarlet fever, all vomited material should also be looked upon as infectious. And in tuberculosis, diphtheria, scarlet fever, and infectious pneumonia, the sputa of the sick should be disinfected or destroyed by fire. It seems advisable also to treat the urine of patients sick with an infectious disease with one of the disinfecting solutions below recommended.

*Chloride of lime*, or bleaching powder, is, perhaps, entitled to the first place for disinfecting excreta, on account of the rapidity of its action. The following standard solution No. 1, is recommended:

*Dissolve chloride of lime of the best quality in soft water, in the proportion of four ounces to the gallon.*

Use one pint of this solution for the disinfection of each discharge in cholera, typhoid fever, etc. Mix well and leave in vessel for at least ten minutes before throwing into privy-vault or water-closet. The same directions apply for the disinfection of vomited matters. Infected sputum should be discharged directly into a cup half full of the solution.

**STANDARD SOLUTION No. 2.**—*Dissolve corrosive sublimate and permanganate of potash in soft water, in the proportion of two drachms of each salt to the gallon.*

This is to be used for the same purposes and in the same way as Standard Solution No. 1. It is equally effective, but it is necessary to leave it for a longer time in contact with the material to be disinfected—at least an hour. The only advantage which this solution has over the chloride of lime solution consists in the fact that it is odorless, while the odor of chlorine in the sick-room is considered by some persons objectionable. The cost is about the same. It must be remembered that this solution is highly poisonous. It is proper, also, to call attention to the fact that *it will injure lead pipes if passed through them in considerable quantities.*

**STANDARD SOLUTION No. 3.**—*To one part of Labarraque's Solution (liquor soda chlorinata) add five parts of soft water.*

This solution is more expensive than the solution of chloride of lime, and has no special advantages for the purposes mentioned. It may, however, be used in the same manner as recommended for Standard Solution No. 1.

**Disinfection of the Person.**—The surface of the body of a sick person, or of his attendants, when soiled with infectious discharges, should be at once cleansed with a suitable disinfecting agent. For this Standard Solution No. 3 may be used.

In diseases like smallpox and scarlet fever, in which the infectious agent is given off from the entire surface of the body, occasional ablutions with Labarraque's Solution, diluted with twenty parts of water, will be more suitable than the stronger solution above recommended.

In all infectious diseases the surface of the body of the dead should be thoroughly washed with one of the standard solutions above recommended, and then enveloped in a sheet saturated with the same.

**Disinfection of Clothing.**—Boiling for half an hour will destroy the vitality of all known disease germs, and there is no better way of disinfecting clothing or bedding which can be washed than to put it through the ordinary operations of the laundry. No delay should occur, however, between the time of removing soiled clothing from the person or bed of the sick and its immersion in boiling water, or in one of the following solutions; and no article should be permitted to leave the infected room until so treated.

**STANDARD SOLUTION No. 4.**—*Dissolve corrosive sublimate in water in the proportion of four ounces to the gallon, and add one drachm of permanganate of potash to each gallon to give color to the solution.*

One fluidounce of this standard solution to the gallon of water will make a suitable solution for the disinfection of clothing. The articles to be disinfected must be thoroughly soaked with the disinfecting solution and left in it for at least two hours, after which they may be wrung out and sent to the wash.

*Solutions of corrosive sublimate should not be placed in metal receptacles, for the salt is decomposed and the mercury precipitated by contact with copper, lead, or tin. A wooden tub or earthen crock is a suitable receptacle for such solutions.*

Clothing may also be disinfected by immersion for two hours in a solution made by diluting Standard Solution No. 1 with nine parts of water—one gallon in ten. This solution is preferable for general use, especially during the prevalence of epidemics, on account of the possibility of accidents from the poisonous nature of Standard Solution No. 4.

**Disinfection of the Sick-room.**—In the sick-room no disinfectant can take the place of free ventilation and cleanliness.

*When an apartment which has been occupied by a person sick with an infectious disease is vacated, it should be disinfected.* But it is hardly worth while to attempt to disinfect the atmosphere of such an apartment, for this will escape through an open window and be replaced by fresh air from without while preparations are being made to disinfect it.

The object of disinfection in the sick-room is, mainly, the destruction of infectious material attached to surfaces, or deposited as dust upon window-ledge, in crevices, etc. If the room has been properly cleansed and ventilated while still occupied by the sick person, and especially if it was stripped of carpets and unnecessary furniture at the outset of his attack, the difficulties of disinfection will be greatly reduced.

All surfaces should be thoroughly washed with a solution of corrosive sublimate of the strength of one part in 1000 parts of water, which may be conveniently made by adding four ounces of Standard Solution No. 4 to the gallon, or one pint to four gallons of water. The walls and ceiling, if plastered, should be whitewashed with a lime wash containing the same proportion of corrosive sublimate, or they may be brushed over with the aqueous solution. Especial care must be taken to wash away all dust from window-ledge and other places where it may have settled, and to cleanse thoroughly crevices and out-of-the-way places. After this application of the

disinfecting solution, and an interval of twenty-four hours or longer for free ventilation, the floors and woodwork should be well scrubbed with soap and hot water, and this should be followed by a second more prolonged exposure to fresh air, admitted through open doors and windows.

Many sanitary authorities consider it necessary to insist upon fumigation with sulphurous acid gas—produced by combustion of sulphur—for the disinfection of the sick-room. As an additional precaution, this is to be recommended, especially for rooms which have been occupied by patients with smallpox, scarlet fever, diphtheria, typhus fever, and yellow fever. It should precede the washing of surfaces and free ventilation above recommended. But fumigation with sulphurous acid gas alone, as commonly practised, cannot be relied upon for the disinfection of the sick-room and its contents, including bedding, furniture, infected clothing, etc., as is popularly believed.

*Disinfection of Privy-vaults, Cesspools, etc.*—When the excreta—not previously disinfected—of patients with cholera or typhoid fever, have been thrown into a privy-vault this is infected, and disinfection should be resorted to as soon as the fact is discovered, or whenever there is reasonable suspicion that such is the case. Disinfection may be accomplished either with corrosive sublimate, or with chloride of lime. The amount used must be proportioned to the amount of material to be disinfected.

*Use one pound of corrosive sublimate for every five hundred pounds—estimated—of fecal matter contained in the vault, or one pound of chloride of lime to every thirty pounds.*

Standard Solution No. 4, diluted with three parts of water, may be used. It should be applied—the diluted solution—in the proportion of one gallon to every four gallons—estimated—of the contents of the vault.

If chloride of lime is to be used, one gallon of Standard Solution No. 1 will be required, for every gallon—estimated—of the material to be disinfected.

All exposed portions of the vault, and the woodwork above it should be thoroughly washed down with the disinfecting solution.

*Disinfection of Ingesta.*—It is well established that cholera and typhoid fever are very frequently, and perhaps usually, transmitted through the medium of infected water or articles of food, and especially milk. Fortunately we have a simple means at hand for disinfecting such infected fluids. This consists in the application of heat. *The boiling temperature maintained for half an hour kills all known disease germs.* So far as the germs of cholera, yellow fever, and diphtheria are concerned, there is good reason to believe that a temperature considerably below the boiling point of water will destroy them. But, in order to keep on the safe side, it is best not to trust anything short of the boiling point (212° F.) when the object in view is to disinfect food or drink which is open to the suspicion of containing the germs of any infectious disease.

During the prevalence of an epidemic of cholera it is well to boil all water for drinking purposes. After boiling, the water may be filtered, if necessary to remove sediment, and then cooled with pure ice, if desired. A sheet of filtering paper, such as druggists use, and a glass or tin funnel, furnish the best means for filtering water on a small scale for drinking purposes. A fresh sheet of paper is to be used each day.

#### THE GERM THEORY OF DISEASE IN ITS RELATION TO THERAPEUTICS.

From an Editorial in the *Boston Med. and Surg. Jour.*, March, 1885:—If the views advocated in a recent editorial prove sound, then an infectious disease may be defined as “a conflict between the subject who is smitten and a particular microorganism, which multiplies at his expense, appropriates his air and water, disintegrates his tissues, or poisons him by the decompositions which accompany its development.” Granting this definition (to which daily increasing knowledge lends support), the study of bacteria in general, and especially of the morbigenous bacteria, possesses a surpassing interest to



every physician who is not content merely to plod along in the ancient but obscure, and often dangerous and perplexing, path of empiricism.

As for the unfortunates who may be proved to be actually suffering from the invasions of the parasite, the problem of the therapist will be still somewhat difficult of solution. How best to destroy the parasite, and not injure his patient? He may not be able to apply his germicides in quite as unstinted a manner to the living human organism as he would to infected barracks or emigrant ships; but this leading indication he will ever have in view. In short, when once the cause is ascertained there can ever be but one leading therapeutic indication, namely, to destroy this causal agent, or attenuate as far as possible its influence in the economy.

In surgery and obstetrics it must be confessed that the germ theory has already won triumphs; it has almost revolutionized the treatment of wounds, the methods of performing hazardous and difficult surgical operations (especially on deep parts), and the mode of management of that formidable complication of the lying-in state, puerperal septicæmia. Although the specific microbes of surgical and puerperal infection are not known, or but partially known, the influence of bacteria of some baneful kind on septicæmic processes is none the less recognized, and the results of strict aseptic treatment, germicide sprays, germicide dressings, and absolute cleanliness are of the most brilliant kind.

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### THE FEVER EPIDEMIC IN LOUISVILLE.

By J. N. M'CORMACK, M.D., Secretary of the Kentucky State Board of Health.

Dr. M'Cormack's report, on an epidemic of alleged typhoid fever which prevailed in the city of Louisville, Ky., in the Autumn of 1884, and made to the State Board of Health, appears in the *Louisville Med. News*, March 21, 1885. The following is at abstract:—

The water-supply is from the Ohio River, supplied by the reservoir system, and from the public wells, of which there is one for almost every square. The intake for the waterworks is at a safe distance above the city. The large amount of vegetable matter held in suspension causes it to rank low in the chemical analysis, but the small amount of chlorine and the absence of nitrites and free ammonia are favorable to it, and the result of the microscopical examination is still more so.

There are about eight hundred public wells in the city, of which five hundred are of brick and stone, sometimes lined with cement; two hundred and fifty of cement; and fifty tubular or bored wells. The brick and cement wells are from thirty-five to forty feet deep, and, as it is impossible for the men to work in water of a greater depth, they never extend more than four or five feet into the water-bearing stratum. In consequence of the sandy character of the soil, the banks are supported by wooden drums while the well is being dug, inside of which the brick wall is built. In sinking the cement wells no temporary drum is required. The tubular wells are seventy-five or more feet in depth. Nearly all the wells are located near the curbing, and are usually at the street corners, where the gutters intersect and where the catch-basins are constructed. In very many instances depressions are to be found in the gutters in front of the pumps, filled with an offensive semi-liquid muck. I examined one of the brick wells on the inside, and the same dirty fluid could be plainly seen trickling down the wall next to the gutter, and I was informed that this was common in all the old wells, and that an average of from twelve to eighteen inches of muck from each of these wells was removed every twelve or eighteen months.

In addition to the danger from direct sewerage from the gutters, there is a greater danger of contamination of these wells from the surrounding soil. Every well may be said to drain a circumjacent region which may be represented as an inverted cone, with its apex at the bottom of the well and its base at the surface of the ground. The diameter of the base will depend on the depth of the well and the character of the soil, and here would probably be from one hundred to two hundred feet. In most instances such an area

would include several vaults, cess-pits, foul back yards, alleys, and other sources of filth.

Sewers have been constructed very generally in the central portion of the city, but house connections are not enforced, and when made are under little or no official supervision, the connections being left largely to the caprice of the owner and the honesty of the plumber. There are some sewers in the western portion of the city, but these have few house connections, and even in the other portions of the city where house connections are had it is a common custom to have privy-vaults in the yard for servants; in all other sections the vault system is relied upon by a large majority of the inhabitants.

Under the entire city there exists a sort of underground lake flowing slowly to the northwest. A well sunk to a distance of from thirty-five to forty feet at almost any corner furnishes an abundant supply of water from this lake, and from thirty-five to fifty vaults sunk almost to the same level in every square utilizes the same body of water in carrying off their foul contents. In this way thousands of gallons of urine and liquid feces are daily poured into the source of the water-supply, and, as this contamination begins at the southern limits of the city, it would naturally become greater as it passes under it, the wells near the river in the northwestern portion being the foulest. In the main this theoretical view seems to be sustained by the examination of the water, and the prevalence of the fever during the past year, but more extended observations on this point will be necessary to settle this question. It is often urged that the soil is a sufficient filter to prevent this pollution of the water, but when it is remembered how soon an ordinary filter becomes fouled from the passage of water through it not especially impure, and then the quantity of concentrated filth which has been poured into the porous soil under this city for the past hundred years, it will be seen how little reliance can be placed on this natural filter. No doubt it still acts as a strainer, keeping back solid material, but affording little protection against soluble substances.

Among the wealthier classes in the central portion of the city kitchen slops and garbage are probably properly disposed of with a majority, but in the unsewered districts the usual practice is to throw or drain the house refuse into the alleys, gutters, or vaults.

These in brief are the facts as I gather them. In a location naturally malarious, and where the strictly malarious diseases still constitute a very considerable part of the sickness, owing to defective drainage and an impure water-supply, we have added the filthy anti-hygienic conditions found in all unsewered towns, and the natural consequence, a high death-rate from what are now known as filth diseases. Thus we see that in ten years there were 1,980 deaths from diarrheal diseases, 846 from scarlet fever, 217 from diphtheria, and 977 from typhoid fever—3,521 deaths from preventable filth diseases. In the light of these instructive, if not pleasant historical facts and surroundings, and of our own investigations, we are to look for the cause of the recent endemic of fever. Typical unhealthy conditions are found on all sides. Leaking vaults or dry wells—a system long since condemned by sanitarians—are found in the rear of most houses, and the exhalations and drainage from these and from the polluted surface soil constantly befool the atmosphere and water. An analysis of the water used by most of the families in which the disease occurs shows it to be contaminated with organic matter, and under the microscope it is found to be teeming with the lower forms of organic life. The disease is found to be most frequent where the water would naturally be foulest, and in the fall season when the water is lowest and most concentrated, and where the bad sanitary conditions are most abundant. It also occurs in a few cases where hydrant-water is used, and in some houses where the sanitary surroundings are apparently the best. Can we explain these exceptional cases with our present information? No; although special inquiry in each case would no doubt usually show a dry well defective drain, foul cellar, or impure emanations from neighboring premises; for it may be laid down as a rule that this order of disease only occurs in the presence of sanitary defects. As might be expected from the difficulties naturally surrounding the question, a variety of opinions was found to exist among the

physicians as to the exact character of the disease. To these opinions, and especially to the symptoms upon which they were based, I have given most careful attention. Starting out in the investigation with no preconceived notions and with no theory to sustain as to the character or cause of the disease, I am inclined to the opinion, after weighing all the testimony, that it is not specific typhoid fever, but a mongrel type of non-specific fever, produced by the combined influence of filth and malaria—the typho-malarial fever of Woodward, and the continued malarial fever of Loomis. In the later stages of severe and fatal cases, what are known as “typhoid symptoms” were often well marked, as they usually are after a long continued high temperature from any cause, but in a majority of cases few of the distinctive features of typhoid fever were present, and, so far as I can learn, the entire endemic furnished few cases in which there was from the outset that peculiar group of symptoms which should have been commonly present in an outbreak of that disease in the midst of such unfavorable sanitary surroundings. The mild character and short duration of most of the cases, and the large proportion of females and children attacked, taken with the prevalence of malaria, which seems to be antagonistic to typhoid-fever germs, argue strongly in the same direction.

This, however, is a question of scientific rather than of practical interest. Whether or not the polluted water and the exhalations from ponds, vaults, cellars, yards, and alleys produce the disease by their own foulness, or were the hot-beds for the development of the disease germs from ordinarily harmless organisms, or for the reception and multiplication of specific germs from a previous case, are questions which may well be left to the future, as their determination will give us little practical assistance. In any event these conditions are essential to the prevalence of such diseases, and, what is of equal importance, they lower the vital resistance to and largely increase the mortality from all kinds of sickness; and their removal or abatement becomes a necessity if the train of evils which has attended them here and elsewhere is to be avoided. In scores of cities, in this and other countries, the relations between these conditions and the prevalence of such diseases has been shown. For example, in an address delivered before the fifth congress of the Sanitary Institute of Great Britain, Douglass Galton said: “It may be accepted as certain that in every case where the sewerage of towns has been devised on sound principles, and where the works have been carried on under intelligent supervision, a largely reduced death-rate has invariably followed.

### MOUNTAIN FEVER.

By DAVID SCOTT, M.D., Spokane Falls, Washington Territory.

From the *Kansas City Medical Record*, April, 1885:—The fall of 1880 witnessed the beginning of the great rush of immigration to Dakota. In September of that year I located at Pierre, on the Missouri River, and the prospective terminus of the Northwestern Railway. The latter, being built at the rate of two miles a day, was employing several hundred laborers. Of the village itself, the population at this time did not exceed five hundred. When I arrived on the ground, September 5th, I was the only physician (though others soon followed); and I found myself confronted by a form of fever entirely new to me. During the months of September and October I treated, as my notes show, seventy-three cases of fever, forty-eight of which were in the camps of the railway laborers, and the balance in the families of the village, ranchmen and teamsters on the Black Hills' freight lines. That my first cases should puzzle me I think you will readily see, when I inform you that they were typhoid fever with the abdominal symptoms left out; and, briefly, that is my definition of mountain fever. It is typhoid fever with the principal anatomical lesion of that disease lacking, viz., inflammation of the glands of Peyer. We have the typhoid skin (except the characteristic eruption), tongue, temperature and pulse, the latter ranging from 100 to 120 or even higher; but as it increases in frequency its force declines. It is a pulse of debility. The same ataxic symptoms, cases varying in this par-

ticular just as they do in typhoid; some characterized by merely a mental hebetude, others with low muttering, delirium, subsultus tendinum, carphologia, stupor, and in a few cases active delirium. Bronchial complications exist in about the same ratio as in typhoid, and due to the same cause—hypostatic congestion. In most of the cases the skin remained dry throughout; exceptionally there were cases with free perspiration. Usually the skin was dry and dusky, the secretions diminished; urine lessened in quantity, with, of course, increased specific gravity, and in a few cases slightly albuminous, but not sufficiently so to constitute a pathological element in the disease.

I desire to call attention to two important features of this disease proving conclusively to my mind that it is a new fever, at least so far as our medical literature is concerned, and first the fact of the bowels not being implicated proves that it is not typhoid, which it so nearly resembles. In fact, the belly remains flat throughout its whole course, and, from the fact that anorexia prevails, and forced feeding of the usual concentrated diet of the sick-room is all that the patients take, the belly usually becomes retracted, in some cases really hugging the spinal column, owing to the emptiness of the intestines. There is no diarrhoea, the bowels usually requiring a mild laxative; and the excreta is normal in character. Again, it is a continued fever, running from twenty-one days in mild cases to fifty-six in extreme ones. From an observation of nearly one hundred and fifty cases that I treated during my two and one-half years' residence in Dakota, and a few cases seen at this place last autumn, I should place the average duration of the fever at about twenty-eight days, that is, counting from the time the patient seeks medical advice, or takes to the bed, until convalescence is established. The convalescence is very tedious, more so than in typhoid even. In fact, it is usually many months before the subject regains his usual vigor. It is not remittent, except in the sense that all fevers are so. We have the morning fall and the evening rise, the temperature ranging about 101° to 102° F., morning; 103° to 104° F., evening; exceptionally it may reach 105° F. I believe I have never seen that figure exceeded, except in a fatal case mentioned hereafter. It is positively not malarial, for the good and sufficient reason that quinine will not abort it nor shorten the attack.

Of symptomatology I have said much; of its pathology I can add nothing. The intrinsic tendency is unquestionably to recovery. The tendency to death is certainly by slow asthenia, and the indications are to support the patient first, last, and all the time. Alcoholic stimulants and alimentation form the basis of the treatment. That the disease sometimes proves fatal there is no doubt.

Regarding causation I can say but little. It is an autumnal fever, though I have met with cases at all seasons. It usually begins late in August, though it may come earlier, and it invariably ends with the beginning of winter. No age or sex is exempt, but by far the largest number attacked are young men and laboring men. In regard to the probable causation I can only advance one plausible theory, and I give it for what it is worth; and that is the great diurnal variation of temperature that occurs in elevated countries. During that memorable September, 1880, the thermometer ranged in the nineties during midday, frequently reaching 100° F. in the shade; and at night water exposed outside of the house would be found frozen in the morning. This, coupled with the fact that by far the larger number attacked were men who worked exposed to the direct rays of the sun, and slept in the same garments they wore during the day.

Regarding the morbid anatomy of this disease, I am sure that here, as in all diseases characterized by long-continued high temperature, parenchymatous degenerations take place in the various organs—the liver, kidneys, spleen, the muscular structure of the heart, etc. This opinion I had a chance to verify in the case of a young man of twenty-six whom I was called to treat in the second week of the fever. In this case the temperature was very high, 106° F. He was wildly delirious, requiring to be held in the bed, spitting out food and medicine; and died in thirty-six hours after I was called in, and on the twelfth day of the attack. With some difficulty myself and Dr. Henry Frisius succeeded in getting permission to examine the abdominal

organs. Briefly, the autopsy revealed a healthy condition of the intestinal canal, but we found fatty degeneration, or what is usually denominated "cloudy swelling" of the liver, spleen, and kidneys. The liver and spleen were notably softened and pulpy.

I am firmly of the opinion that "mountain fever" is not a myth in the brains of ignorant Western practitioners, but a new and distinct pathological entity, and as such it should take its place in medical literature.

### ON TYPHOID FEVER, ESPECIALLY WITH REFERENCE TO PROGNOSIS.

By WILLIAM PEPPER, M.D., LL.D., Provost of, and Prof. of the Theory and Practice of Medicine in, the Univ. of Penn.

From the *Philadelphia Medical Times*, April 4, 1885:—We estimate the gravity of an attack of typhoid fever, in the first place, by the range of temperature. If the temperature is not above 104° F. it is not an unfavorable sign. If it reaches 105° F. but does not remain at that point, it is not serious. Anything above 105° F. we term hyperpyrexia, and this is a dangerous sign, particularly if the temperature remain almost continuously, day and night, above 105° F. When, however, as in the present case, the temperature ranges between 101° F. and 104° F., and does not exceed this latter point, it does not become a source of much added danger. In children and in sensitive women a temperature of 105° F. is often reached and maintained for some time without serious danger. It is important to recognize this fact, for it will save the necessity of resorting to powerful measures to reduce the temperature. Far too much importance—or, rather, far too exclusive importance—is nowadays attached to the study of the temperature in febrile diseases. It is important, and should be carefully watched, for it aids both in prognosis and in treatment; but the ease with which thermometric observations are made, their accuracy as contrasted with the manner in which many other symptoms have to be studied, and the certainty which they seem to give in studying the course of the case, are apt to divert our attention to too high a degree from the study of the pulse, the nervous system, and the digestive organs; whereas, as a matter of fact, the temperature in many cases is less important than information drawn from the other points to which I have referred. Particularly I am sure that we allow our treatment to be governed too exclusively by this question of temperature, and are too prone to resort to powerful antipyretics, which sometimes are depressing, irritating, and disturbing. Many cases of typhoid fever do perfectly well without severe antipyretic treatment, even though the temperature be high. It is only when the nervous symptoms and the condition of the heart indicate that the high temperature, in the absence of other complications which would account for the symptoms, is acting as a disturbing element on the brain and the heart that it calls for active treatment. Then we should resort to any plan of antipyretic treatment which is efficient, as large doses of quinine or the external use of water. So long as the high temperature is maintained without manifest injury being inflicted on the brain or the heart, it is better to avoid powerful antipyretic measures and to allow the case to run its normal course. This is particularly applicable where there are complications which are of themselves sufficient to maintain the high temperature and account for a certain amount of nervous irritation. Under such circumstances these powerful remedies often do more harm than good.

Among the indications to be considered in the prognosis I have mentioned the condition of the heart and the pulse. This is exceedingly important. I think that the study of the sounds of the heart—of the strength of the muscular or first sounds of the heart, the strength of the impulse, the way in which the artery fills at the wrist, how it resists pressure, the quality of the beat, the frequency of it, and its regularity—is of the first importance in the prognosis of typhoid fever and as a guide to treatment, particularly in regard to the important question of the administration of stimulants. You have a patient with a dry, brown tongue and marked nervous symptoms. It may be difficult to

decide whether he needs remedies of a sedative character, and perhaps counter-irritation, to quiet the nervous restlessness and draw the excitability from the nerve-centres, or whether he requires stimulation to raise the tone of the circulation and cause a healthier tone of action in the nerve-centres and thus bring about a secondary quieting or sedative effect. The best test of this is the action of the pulse and the influence of stimulants on the pulse. In a case where the pulse is from 120 to 140 per minute, very compressible, so that it collapses under the slightest pressure, with an exceedingly weak first sound, so that it assumes almost a valvular character, stimulants may be given freely; and under their use, as a rule, the temperature will fall, dryness of the mouth will lessen, and the nervous system will improve. These results indicate that the stimulants are doing good, and encourage us to continue or to increase them.

This man needs free stimulation, and if he can stand one ounce of whiskey every hour we will not hesitate to give it to him through the next two or three days, to tide him over this crisis, for unless the heart is kept up I fear that he will die in the way which I have mentioned.

Symptoms referable to the abdominal organs afford some help in prognosis, but they are not as reliable as the evidence presented by the temperature and the circulation. When, however, there is continued diarrhœa, with frequent copious stools, particularly if discharged unconsciously, with distension of the abdomen, showing that the intestinal muscles and the muscles of the abdominal walls are paralyzed, the prognosis is extremely bad, for such diarrhœa is apt to prove uncontrollable.

Hemorrhage from the bowel often occurs as a hemorrhoidal discharge and means nothing serious. Slight hemorrhages occurring early are not of evil omen, and hemorrhage occurring at the time that the sloughs are cast off may not be serious; but where the bleeding is frequently repeated and the amount lost is large, and where it is associated with diarrhœa and great tympanitic distension of the abdomen, it indicates such prostration of vitality and such dyscrasia of the blood as to render the prognosis very unfavorable.

The tympanites sometimes goes so far as to constitute an important element in the prognosis. It indicates, in the first place, a paralytic state of the muscles of the abdominal walls; and in the second place it indicates fermentation of the ingesta and deficient digestion and absorption. This distension, by its pressure upward, causes marked interference with respiration and adds greatly to the effects of any pulmonary trouble which may co-exist. Distension of the abdomen in typhoid fever should be studied in this way so as to be traced to its proper cause. If it is the result of muscular debility, it will be helped by stimulating applications. Strychnia is particularly useful in these cases. If it is the result of fermentation of the ingesta, it may often be diminished by peptonizing the food and by the internal use of carbolic acid and creasote, which will lessen fermentation. Where the accumulation of gases interferes with the action of the diaphragm, an attempt should be made to draw off the gases by a rectal tube. This operation usually has to be repeated, and I have even been forced to puncture the abdominal wall with a hypodermic needle to draw the gases from the intestine; and I have seen patients recover where I have had to do this on several successive days on account of interference with respiration. As a rule, however, when it comes to this point death follows.

The pulmonary symptoms of typhoid fever afford very important elements in prognosis. We should never let a day pass without examining the lungs and heart of our typhoid-fever patients. A certain amount of bronchial irritation is an almost constant element in typhoid fever. Usually by the end of the second or during the third week we find hypostatic congestion, with a little impairment of resonance, weak vesicular murmur, and crepitant râles on inspiration over the lower lobes behind. This we consider an almost inevitable feature of the disease; but when, instead of merely a hypostatic congestion, the disease, as here, goes on to consolidation, and, as you observe, is unilateral, not symmetrical as is hypostatic congestion,—not limited to the lower lobes, but involving first the lower lobe and then extending to the upper lobe, with bronchial respiration and with coarse, crackling râles,—we

know that it is not merely an exaggerated degree of that congestion incident to the disease, but that it is a real complication, a croupous pneumonia.

Sometimes it takes the form of catarrhal pneumonia; and this is even worse than croupous pneumonia.

The nervous symptoms are always valuable in prognosis and treatment. We expect a certain amount of nervous disturbance in these cases, and rarely is it wanting. Occasionally it is absent, and this year particularly I have seen an unusually large number of cases of typhoid fever which were characteristic in other respects, but presented no nervous symptoms whatever. Another curious fact is that in many cases during the past year the abdominal symptoms were wanting, and many cases presented constipation, so that it was necessary to use an enema every third or fourth day. In some cases I gave once a week a grain of calomel in one-tenth of a grain doses, followed by an enema. As a rule, however, we expect some nervous disturbance. As long as it is only a little night-delirium it is not an evidence of much danger. This is, of course, more marked in those of a nervous temperament. When it deepens into marked hebetude with tendency to stupor, or, still more, when it takes the form of constant, restless delirium, with quick, suspicious glances of the eye alternating with dulness, with constant twitching even when the patient seems to be asleep, with plucking at the bedclothes, it is a symptom of gravity. Other grave nervous symptoms are struggling constantly to rise and slipping down in the bed as from muscular debility. I need not say that profound stupor and convulsions are very serious symptoms. As a rule, the nervous symptoms of typhoid fever are evidences of debility and call for a stimulating plan of treatment. When in the early stage of the disease they are present, with marked arterial excitement, flushing of the face and injection of the eye, they are indications for counter-irritation and a sedative plan of treatment. Here, then, is an important guide for treatment. If under the use of stimulants the nervous symptoms diminish and sleep become more natural, we know that the stimulants are doing good.

### THE DIFFERENT TYPES OF FEVER.

By JOHN L. TRED, M.D.

From the *Kansas City Medical Record*, April, 1885:—*The first point* to which I would draw attention is that clinical pictures of disease are not unerring guides in diagnosis. Nature is not bound by the hard and fast lines of our nosologists; and in medicine, as elsewhere, the maxim "*similia non eadem*" must never be forgotten.

*Another point* is that our descriptions of types of fever are derived from observations made in England, France, and Germany; that the general cosmic conditions of those countries are vastly different from the conditions obtaining in this and other countries, and that the same remarks hold good with respect to the different parts of the United States among themselves.

*A third point*, and one of vast importance, is, that after that condition which we know as fever or pyrexia has been once established, various secondary effects are produced. As a rule, the ingestion of food, the ejection of waste, and the ordinary regular normal metamorphoses of matter are greatly interfered with, and in many respects entirely changed; so that in the space of twenty-four hours the system may become considerably contaminated with matters of a toxic nature, which add their deleterious effects to the already existing deleterious effects of the primary morbid cause. This condition I have often endeavored to express by the term autogenetic infection; and it is largely to this process that the unfavorable course of many cases of fever is due.

First as to the grounds of discrimination. The chief of these is the absolute cause of the attack. Thus in the exanthems, the cause of scarlatina will not produce variola, nor will that of variola give rise to rubeola; and this condition prevails also in true enteric or typhoid fever, which is the effect of the introduction of one specific form of toxic matter into the system.

The same ground of classification is also observed in regard to malarial fever, which may be briefly stated as the effect of the introduction of terrestrial exhalations containing toxic matter—probably fungoid—into the system.

In relapsing fever the cause is the spirilla.

The same ground of classification also obtains in regard to typhus, which may be briefly stated to be the effect of the introduction of animal exhalations into the system, these always containing effete matter which is highly toxic.

We have also fevers arising from cosmic influences, such as heat, cold, dryness, atmospheric moisture, magnetic or electric influences, and the like.

We have also fevers arising from ingestion of toxic material in food and drink; and fevers complicated with an original phlegmasia.

Another ground of discrimination has been the course of the disease; thus we have periodic and continued fevers. But this ground of distinction has been found to be so defective that it has been generally abandoned, and the terms intermittent, remittent, and continued are employed mostly as secondary qualifications.

It is also evident that one cause of fever will not necessarily prevent the action of another cause, and therefore we may have mixed forms of fever.

Secondly, passing to the different kinds of idiopathic fever, we may mention: first, specific forms; second, malarial forms; third, typhus forms; fourth, synochoid forms; fifth, mixed forms or compound.

Dr. Teed then gives sketches of the views of Copland, Jenner, Murchison, Fayrer and others concerning enteric fever, and says:—From this brief résumé it may be seen that the term typhoid or enteric fever is used in such a loose, vague manner that, unless some especial adjective is employed, it conveys no definite signification. It may mean any form of fever, and leads to no practical mode either of prevention or of cure. Individually the term typhoid has been always employed by myself to signify a form of disease, the specific result of a specific cause, always different from malarial enteric, and whose materies morbi might be inhaled with the air or swallowed with the saliva, the food, or the drink.

As long as our city retained its early character—dwellings rather far apart, with spacious yards; cess-pools deep and built up open and without cement, and lying in a porous soil; the drinking-water preserved in cisterns, with filters—the dangers of enteric fever were few; but as the population increased, as houses became more crowded together, as drinking-water was derived from the adjoining rivers, and as a system of so-called sewerage was introduced, faulty in plan, vicious in construction, and accompanied by all the evils of fraudulent plumbing, I years ago expressed the opinion that it would be no surprise to find specific typhoid fever an extremely common occurrence.

### THE REPARATIVE AND THE RESISTING POWER IN THE HUMAN BODY.

By H. D. DIDAMA, M.D., Syracuse, N. Y.

In his address as Chairman of the Section in Medicine, *Amer. Med. Ass'n*, April 29, 1885, Dr. Didama said:—We are familiar with what is called the *vis medicatrix naturæ*. It is a power which is sufficient in many—perhaps most—cases of disease to effect a cure. Sometimes it brings relief while the physician simply watches or gives inert drugs—and claims all the credit. Sometimes it corrects disorders with the well-timed aid of the doctor. Sometimes it triumphs over the combined attack of the disease and the blundering medicine-man. This reparative power is the best friend and ally of the wise physician. It may be too weak to accomplish its purpose, and so may need timely and sufficient aid. It may overdo the matter, and so need wholesome restraint. It may be irregular in its action, and so need careful guidance.

Now, while we are familiar with this reparative power, we may not be so attentive to another conservative force which is especially important: the



resisting power. From the *vis medicatrix* this power differs essentially. One is a restorative force—a tendency to come back to the normal condition after departure from it. The other is the conservative force, which *prevents* departure. A steel spring yields readily to external force, but its elasticity—after the disturbing cause is removed—enables it to resume its original condition. This is the *vis medicatrix*. Granite rock is not easily affected by external violence. Its power of resistance is great. When the force brought to bear upon it is strong enough to cause it to yield, it goes to pieces, having no recuperative power. There may be great toughness combined with great resisting power. The iron-clad vessel, when struck by ponderous ball or steel bolt, may be perforated, but it is not hopelessly shattered. This resisting power is akin to what is called inertia in physics—the tendency of a body in motion to keep going; of a body at rest to remain quiet forever. Light bodies with little substance are easily set in motion, and easily deflected from their course, or arrested in it. A feather can be wafted or stopped by the lightest breath. A cannon-ball, an avalanche, are turned aside by no obstacle; they move onward to their destination.

Every human being has more or less of this resisting power. It may be feeble and yet so united to a recuperative force that the individual possessor manages to get along fairly well. Any trifling mishap or exposure may prostrate him, as a reed may be shaken in a moderate wind; but his elasticity, like that of the reed, brings him up promptly when the storm ceases. He has his frequent ups and downs—we all know many such cases; he is delicate of constitution; he may be like an estimable old lady of my acquaintance, at the point of death at odd spells for thirty years; and yet he lives on by virtue of the *vis medicatrix*, of which he seems to be composed, till all his acquaintances have passed off the stage of action.

On the other hand, this resisting power may be like that of the granite. Its owner may violate all sanitary laws, may laugh to scorn all counsel about what he should eat or drink, or wherewithal he should be clothed. He may expose himself unprotected to cold and wet. He may go without sleep and food. He may tax stomach and brain and muscle to the utmost. And yet he may remain undisturbed. We know such men—men who guzzle poor whisky every day, and live to be a hundred years old. We know men of granite constitutions who prowl around late at night when they should be snugly in bed; who gormandize, who exercise vigorously all the vices; and yet who remain a standing refutation—as superficial observers think—of all rules for preserving good health. But when some overwhelming calamity comes they are stricken down forever; their first illness is their final one; they crumble to atoms.

In every community are those whose resisting power is so feeble from inheritance or so thoroughly impaired by excesses that they are but walking dead men—apples of Sodom, perhaps—fair to look upon, but ashes or putrefaction at the core. They yield to influences which are trivial in their nature, and go into the hands of the undertaker before their neighbors have even heard of their illness.

There are children of old or debauched or scrofulous parents, whose resisting power is so nearly *nil* that their aspirations to stand with the angels receive early gratification, in spite of all that love and skill can do to keep them away from their heavenly home. We name the messenger who summons them cholera infantum, or tuberculous brain disease, or white swelling; and as parents, while we wonder at the mystery, we bow submissively to Him who gives and then takes again so soon.

The good constitution, the strong resisting power of the temperate and upright man, is not only a sure personal defense against diseases and a guaranty of longevity; it is transmitted to his offspring down to many generations. The dissolute man, broken down with diseases acquired while sowing his wild oats, suffers not alone. If he did, we might view the transaction with mitigated sorrow. He had his coarse enjoyment, and he can afford to reap corruption. But the evil that he does lives after him in the blighted and wretched lives of his innocent children and his children's children. A priceless inheritance is a strong resisting combined with a vigorous recupera-

tive power. He who has it and preserves it and fortifies it, living a clean and active life, eschewing bodily and mental excesses, and clings to the Divine promises, may bid defiance to disease in its multifarious forms.

#### CURARE.—JUCUNDE.

From an editorial in the *Boston Med. and Surg. Jour.*, April 2, 1885:—There are happy exceptions to the general standards of taste. We have all seen patients who enjoy a clean, sharp bitter. An occasional child, brought up on the *oleum morrhue* as upon his mother's milk, takes it with gusto, and even rolls it as a sweet morsel under his tongue. But, unfortunately, nature has invested many of her most useful medicaments with a taste sufficiently pronounced and disagreeable to put men on their guard against reckless partaking of them. It has been suggested that, as the pain sense is to give warning of physical injury, so nauseousness is a danger-signal of poisons and active drugs. This may be, and yet there are certainly some exceptions. Arsenic is tasteless, and so is calomel. (Was the old-time use of this drug, by the way, due to its lack of taste?) Doubtless much can be done to render palatable most of the remedies in common use by suitable vehicles and methods of combination.

A recent correspondent of the *Therapeutic Gazette* gives expression to what we think is beginning to be widely felt, namely, the importance of making prescriptions palatable. He demands with considerable force more definite instructions from our therapeutic teachers on this point. The accomplished editor of the journal referred to also has something to say upon the subject. For instance, he points out that the citrate of potassium can be largely masked by the free use of lemon juice. Muriate of ammonia is largely covered by licorice, provided the latter be added in such quantity that there will be ten to fifteen grains of it for every ten grains of the muriate. The addition of glycerin to a mixture containing an ammoniacal or other irritant salt often has the most happy effect in obtunding the acidity. It must not be forgotten, however, that glycerin throws out of solution most alkaloidal salts. This is essentially important in connection with the fact that the addition of glycerin to the tincture of the chloride of iron is most advantageous from the æsthetic point of view. We are very apt to combine tincture of chloride of iron with salts of quinine, strychnine, or other alkaloids. Even when such solution is very strongly acid, glycerin precipitates the organic principle. Syrup of squills, syrup of ipecac, and most other sweet expectorants, can readily be masked by the syrup of wild-cherry bark, provided cyanide of potassium (at least one-twentieth of a grain to a dose) be added to intensify the prussic-acid taste. The excessive sweetness of these mixtures is disagreeable to some individuals; this, of course, can readily be obviated by the addition of lemon juice or other acid.

It is also pointed out that it seems to be a tradition of the profession that cough remedies should be administered in mixtures, while there is no reason why they should not be given in pill form. Expectorants as well as cathartics could be given in pills, and there seems no reason why copaiba should not be enclosed in capsules when prescribed for chronic bronchitis, as when given for gonorrhœa.

#### HAMAMELIS VIRGINICA.

By HENRI GUY, M.D., Paris, France.

From the *Boston Med. and Surg. Jour.*, April 16, 1885:—The writers' researches in the physiological chemical and therapeutic properties of *hamamelis virginica* leads him to the following conclusions: (1) *Hamamelis virginica* is not toxic. Employed in very large doses it produces no symptoms of poisoning in the inferior animals. It does not appear to be toxic to man, despite the fact recorded by Dr. Camperdon, concerning which there would seem to have been some mistake. (2) It does not appear to have any special physiological action on the vascular system, heart, veins, or arteries. (3) We have

not noted any alkaloid in the bark or leaves; the active principle is probably the essential oil. (4) Therapeutically hamamelis has an uncertain action. It has, nevertheless, given good results in certain cases of hæmorrhoids. As a hæmostatic its action has seemed demonstrated in some circumstances. The results obtained in varices are not conclusive. (5) *Hamamelis Virginica* does not seem to merit the enthusiasm bestowed on it by certain American physicians. It has no clearly defined special action. At the same time, in certain cases, its employment may be attended with success.

### ANTIPYRINE AND ITS EFFECTS.

By WILLIAM H. DRAPER, M.D., Physician to the New York Hospital.

*From the N. Y. Med. Jour.*, April 18, 1885:—It is a striking fact that, while the progress of science adds little to our knowledge of the essential nature of fever, it continues from time to time to enlarge our resources for its control. One of the latest contributions to the means of subduing the heat as well as the other symptoms of fever is antipyrine.

My own experience with this drug was obtained during my late service in the New York Hospital, and mainly in the treatment of twenty typhoid fever cases. The average temperature ranged from 100·6° to 103·6° F.

The maximum dose was 75 grains given in three portions of 30, 50, and 15 grains at intervals of an hour. Dr. Draper concludes his paper as follows: The only conclusions which can be safely drawn from our experience with the drug thus far are:—(1) That it is an efficient means of reducing temperature. (2) That it is apparently a safe means of reducing temperature, if prudently administered and carefully watched. (3) That while it does not so far as our present experience demonstrates, markedly modify or abort the diseases in which it has been administered, it does manifestly contribute to the comfort of those who are suffering from high temperature. (4) That its administration is occasionally accompanied with unpleasant effects, which more than counterbalance the benefits to be derived from the reduction of temperature. (5) That a more extended experience in its use and methods of administration may so formulate the conditions for which it is especially adapted that it will prove a precious contribution to the resources of therapeutics.

### DISEASES OF THE NERVOUS SYSTEM.

#### INSANITY AND DIVORCE.

From an editorial in the *Alienist and Neurologist*, April, 1885:—The problem of divorce in connection with insanity is a grave one, having many aspects and requiring to be viewed with deliberation and decided with prudence. It is a subject, in the discussion of which, sentiment must of necessity largely enter, and from which sentiment can not, will not and ought not, to be entirely excluded, and yet the cold logic of events about us, past and present, admonishes us that society and the state must decide this question on principles of self-preservation with a view to securing to human society the survival of the fittest, otherwise there is no little danger, in highly civilized communities, of the race becoming extinguished through the gradual degeneracy of constant neuropathic accessions and transmissions.

The solution of the vexed problem is plain (or ought to be so) where, of two contracting parties to a marriage, one at the time of the union was insane. The church may pronounce them joined together by God, but the law, placing equal reliance upon the wisdom of the Almighty, but differently interpreting His will in the premises, will declare (or ought to) a compact null between an insane and a sane person, where matrimony is the consideration.

But suppose a person with only the insane diathesis contracts a marriage? Though his or her father and the most of their families may have been insane, and insanity supervenes in either of them upon some slight mental strain, insufficient to even ruffle the mind of mental organisms inherently better endowed, the law gives no remedy, nor should it, in the majority of instances as marriages are now made. But suppose the time should come, as it will, we hope, when future consequences will be considered along with present interests, and the question should be asked as to insanity in the family or damaging nervous diseases, and false answers are given and marriage takes place in consequence, will the neuropath who makes a matrimonial contract on false representations be as liable as the party who falsely represents a horse or other property in order to dispose of it? The consequences of an insane or epileptic person marrying do not fall upon the parties of the marriage contract alone. Their immediate descendants are wronged. No one has a right to bring into being offspring organically greatly defective in brain. The unborn are thus wronged for life, without power or chances of redress. The State is thus wronged in the increased proportion of the imbecile, criminal, pauper and other defective classes thus thrown upon its care. Society is wronged in the increased aggregate of misery placed in its midst. Neither the church nor the law should sanction such unions. If a man or woman, though remotely of good family but neurotically so defective that certain abnormalities of mental organism must be transmitted to offspring, enters into the marriage relation, such a marriage ought to be a nullity so far, at least, as the procreation of the race is concerned, and instead of laws being framed to punish for the prematurely induced birth of such post-natal mental abortions as are likely to result from such ill-chosen alliances, the prevention of such abnormal conceptions should be lawfully justified and encouraged. It were better that full-time children so defectively endowed should not be born, or, if born, should be born not viable.

We are aware that we tread on dangerous ground here, and that wise and extremely cautious discrimination should be exercised when the law undertakes to interdict the procreation of offspring, such prohibition should be securely founded in the higher law of pathological defect and descent based on demonstrable and proven facts, not on conjecture or theory, and its steps should be slow and short and sure. Mistakes may be easily made, such as have been made, respecting the interdiction of the marriage of blood relations, by certain States, to prevent the engendering of idiots.

To be safe and sure, law must be very deliberate and guided only by the unerring revelations, not by the theories of science—and hereditary neuropathic degeneracy is no longer a theory, but a demonstrated fact. As such it is a subject of conservative sanitary legislation, as much so as the most destructive pestilence that walketh in darkness, and a certificate of normal organic nerve and brain endowment should constitute an essential feature of the State's marriage certificate.—*C. H. Hughes, M.D.*

### OVERWORK AND PREMATURE DISEASE AMONG PUBLIC AND PROFESSIONAL MEN.

By CHARLES K. MILLS, M.D., of Philadelphia, Pa.

In the Ninth of the Toner Lectures, instituted by Joseph M. Toner, M.D., of Washington, D. C., Dr. Mills reaches the following conclusions, taken from the publications of the Smithsonian Institution:

1. Intellectual work does not of itself injure health or shorten life, but mental overwork, particularly when associated with emotional strain, is a frequent cause of nervous break-down and premature disease.

2. The average longevity of men in the higher walks of public life is less in this country than in England. Politics here is not, as there, in the best sense a vocation; and our public men, in many cases, succumb in health, or fail to attain long life, because they go into careers unprepared, by inheritance, education and training, for the severe demands to be made upon their powers.

8. Health and life are sometimes lost through forgetfulness of the fact that mental strain and overwork are particularly dangerous to those in middle life or advanced in years who attempt brain work and responsibilities to which they have not been accustomed. The effects of suddenly-imposed mental strain upon these classes are especially disastrous.

4. If not subjected to unusual mental or physical strain, public and professional men, as well as those in other walks of life, although afflicted with organic diseases, may live in comparative comfort, and able to do a moderate amount of work for many years.

5. Among special causes of premature disease in public life are onerous and perplexing duties on Congressional committees, the uncertainties and disappointments attendant upon public positions, the great strain to which candidates are subjected during political campaigns, lack of recreation, and social excesses and abuses at the National Capitol.

6. Among physicians, lawyers, and journalists the performance of brain work under pressure for time, and under bad hygienic conditions, is a common cause of ill-health. Defective education and pecuniary harassments are also special causes of nervous break-down and premature disease among physicians and lawyers.

7. Comparatively few clergymen succumb completely to mental overwork, although many suffer from a mild but annoying form of neurasthenia.

8. The danger to the scientific worker usually arises from too intense and too prolonged activity of the mind in one direction.

9. The system of severe competitive examinations in vogue in many communities saps the health of both teachers and pupils. In our schools generally educational methods are bad, recreation is too much neglected, and unhealthy emulation too much encouraged. Education is not properly individualized.

10. Chronic neurasthenia is not common among men prominent in public affairs and in the professions. Such men are, however, sometimes the victims of a severe acute nervous prostration, which may result in serious organic disease.

11. Nervous strain is one of the causes of lithæmia, which is of not infrequent occurrence among public and professional men, but lithæmia and neurasthenia are not interchangeable terms.

12. The warnings of mental overwork and overstrain vary with individuals and circumstances, but certain psychical symptoms, and such physical symptoms as immobility of countenance, diminished resisting power, heart failure, sleeplessness, cervico-occipital pain or distress, and dyspepsia are of most frequent occurrence.

13. Insanity, particularly in the forms of melancholia and paretic dementia, is sometimes developed by brain strain and overwork. A family history of insanity is often present in such cases.

14. Phthisis, diabetes and Bright's disease are among other diseases most likely to be developed by mental overwork. Men in whose families phthisis is hereditary, should carefully guard against such overwork.

15. Overtaxing the mind and nervous system may be the exciting cause of almost any serious disorder to which chance, accident, imprudence or infection exposes the individual.

16. Many diseases, not nervous in their seat or manifestation, are developed directly or indirectly as the result of mental and nervous strain, through exhaustion, impairment, or lesion of the centres of the organic functions.

### TUBERCULAR CEREBRAL MENINGITIS.

By JOHN B. RICHARDSON, M.D., of Louisville, Ky.

From *Louisville Medical News*, April 11, 1885:—The local pathological condition of this affection can be stated in a few words: The disease is characterized by violent cerebral symptoms, dependent upon the existence of tubercular granulations in the pia mater as the essential anatomical lesion, accom-

panied in the great majority of cases by coincident inflammation of that membrane, by softening of the central parts of the brain, by effusion of serum into the ventricles, and in many instances by tubercular deposits in other organs.

My old teacher, Da Costa, of Philadelphia, asks this question in his work on Medical Diagnosis: "Can we distinguish this formidable complaint from ordinary meningitis?" and answers it as follows: "Seldom from meningitis of the base; generally from meningitis of the convexities." Now, our individual experience warrants our indorsing this expression thus far: It is possible in a typical case, being cognizant of the family history of your patient, as well as his individual history; but the difficulty lies in two directions: First, the insidious manner of its development in many cases; and secondly, you will not be able, in a large number of instances, to elicit the information as to the family history. Among the better class of patients, socially, this may be and frequently is withheld, from a species of false pride, or a determination not to believe a tendency to tuberculous disease exists in their families. Among the more ignorant classes they bother themselves very little with such minor subjects.

Tubercular meningitis usually occurs in an unhealthy subject, who may suffer from tuberculous deposit in any of the other internal organs, or it may be distinguished by its insidious approach, by the mild form of delirium, as also by the appearance of convulsive movements, not early in the history of the case, *but late* (the cephalalgia less violent, the febrile increase being less marked); by the palpable remissions in the cerebral signs, by the chest symptoms, and the chronic duration of the disease. But suppose—and you do meet with such examples—we have no delirium, no convulsive seizures during the first and second stages, and in the third stage not marked in character, with only slight subsultus or twitchings? The disease under consideration, you will recall, is closely simulated by not only *simple meningitis*, but by the acute hydrocephalus and hydrocephaloid disease of Marshall Hall among the diseases of the brain; also by typhoid fever (and for this fever or a typhoid condition it is frequently mistaken), remittent fever, and the inflammatory affections of the lungs, which last mentioned in children are so frequently associated with delirium and other manifestations of a deranged nervous system.

*The period of invasion* may be of long or short duration; if the former your diagnosis is not so difficult, but if the latter its diagnosis may and often does baffle the skill of the profoundest and most experienced of diagnosticians.

The case may begin with symptoms of an attack of indigestion with slight irritability of the stomach and diarrhoea and occasional vomiting, which symptoms may disappear under simple and appropriate treatment, the child manifesting its accustomed degree of intellectuality, possibly a little fretful and peevish, as you would justly expect under recovery from such an indisposition.

A slight concomitant fever is usually present, the thermometer registering 99° to 101° F. Your mental prognosis being, perhaps, that after this we may have a slight malarial expression which we can easily combat with some preparation of bark, and we shall have no further trouble. In this you are doomed to disappointment. The symptoms of indigestion have vanished, but the child's temperature remains above normal, only you possibly may note both morning and evening exacerbations not sufficiently great as to indicate the effects of malarial or typhoid fever. This continues for a few days, the patient sleeping pretty well, its appetite being small and capricious; no difficulty in arousing it from its slumbers for purposes of nourishment or attending to voiding its bladder or bowels; indeed, the patient will express a desire to attend to these calls. You determine you will be conservative in your treatment, and only keep the functions of the skin, kidneys, and bladder duly active. It can not be typhoid fever you reason, as none of the organs, upon the most carefully conducted investigation, yield any abnormal condition, and there is no continuous evening increase of the temperature; it may be

that the heart shows less strength, but that is all. No great degree of headache is complained of. Then, what is this extremely insidious affection? say you.

If the subject be an unhealthy one, the delirium of mild form, the appearance of convulsions occurring late in the history of the attack, the presence of the less acute degree of cephalalgia, as also the remissions in some of the cerebral signs, etc., there can be no difficulty in your safe arrival at a diagnosis. But suppose, as we have witnessed, we have no delirium, no convulsive seizures during the first and second stages, and in the third stage even these not marked in character.

### MONO-CHOREA ASSOCIATED WITH INCREASED TEMPERATURE OF THE PART AFFECTED.

By HOBART AMORY HARR, M.D., Attending Phys. Dispensary of the Univ. Hosp. of Philadelphia.

From the *Boston Med. and Surg. Jour.*, April 2, 1885:—The following cases are reported in order to call attention to what seems to be quite a common occurrence in mono-choreas, namely, an increase in the temperature of the member or part affected. So far as I know, such changes in temperature in this disease have not been reported; although, as every one knows, it is quite common in hemi-choreas to have a *decrease* in temperature of the side affected, accompanied generally by profuse perspiration. In the cases here reported the member affected was invariably hot, dry, and feverish. The color of the skin was more red than normal, the skin also had rather an injected appearance.

The coldness of the parts in hemi-chorea is probably due to some neurosis affecting the blood-supply and also to the constant evaporation of the perspiration, which is caused probably by some disorder connected intimately with the nerves governing the sweat-glands. It is entirely permissible to account for the *increase* of temperature noted in these cases by supposing that the neurosis may be such as to cause the contrary effect of that mentioned in regard to the coldness of the parts, namely, an increased supply of the arterial blood instead of a decreased supply. There is a possibility that this increase of temperature may be due to the constant muscular movements peculiar to the disease, but this is very improbable, since the heat developed by the movements in so few muscles would not be appreciable. It seems to me that the redness and injection of the skin point to the conclusion that the difference in temperature between the affected and unaffected members is due to the inordinate supply of arterial blood in the part. In one or two cases it was impossible to find the temperature of the part by the thermometer, since the hand was often hot and feverish and the axilla normal. As the thermometer used was the one commonly in use at the bedside, it was impossible to take the temperature of the palmar surfaces.

The writer reports five cases in three of which the patients recovered while taking Fowler's solution, and in the other two improvement attended the use of the drug.

### CASE OF TONIC SPASM OF THE ACCESSORIUS SUCCESSFULLY TREATED BY GYMNASTICS AND MASSAGE.

By H. G. BEYER, M.R.C.S., Passed Assistant Surgeon, U. S. Navy.

From the *Medical News*, April 11, 1885:—Miss L. S. M., thirty-five years of age, consulted me about the first week in April, 1884, concerning some trouble in her neck and head. She said she could not retain her head in the desired position, and complained of more or less severe pain in the back of her neck, somewhat indefinitely located between the posterior upper angle of the left scapula and the vertebral column. She was lying in bed at the time, and had been occupying this recumbent position for several months. On

rising, her face would immediately turn toward the left side, her chin at the same time moving slightly upwards, and she could only, by the greatest effort of her will, succeed in turning it in the opposite direction for a moment, when it would immediately return to its former one-sided position, toward the left. The only way she could make herself comfortable was to lie down and keep her head well supported by pillows.

In October, 1882, she received news of the sudden death of a gentleman to whom she was soon to have been united in marriage. The shock was so great, and the grief so overpowering, that she was unable to eat or sleep during the following week. On the 23d, the seventh day after receiving this news, while seated at the dinner table, she noticed a twitching movement, which was, to use her own words, "quick, sharp, and noticeable as an electric shock."

From this time on it grew gradually worse; and she was constantly obliged to rest her head against the back of a high chair while in a sitting position.

April 1, 1884. It did not seem to me to be a case of clonic spasm for the following reasons, viz.: Her head would remain on the left side when she was in the sitting posture and, although for a few seconds and by great effort of the will, she could turn it in the opposite direction for a couple of times, the time did arrive when no amount of will power was sufficient to stay it from turning to the left. On the other hand, it did not present the characters of the condition known as *caput obstipum spasticum*. It was central in origin, because both the trapezius and sterno-mastoid were involved. It was *not hysterical* in nature, as may well be inferred from the history of the case, and also from the fact that general sensibility over both sides of the body was uniformly normal and the tendon reflexes well marked. The head was turned strongly to the left, the chin raised considerably and the occiput approximated slightly to the right shoulder. Besides this, the left shoulder and clavicle were very much higher when compared with the corresponding shoulder and clavicle of the right side.

Regarding the *etiology* of the trouble in this case, the circumstances point clearly to grief from the loss of her friend. No history of exposure of any kind is given, as she kept closely in her room during the seven days that intervened between the receipt of the sad news and the first beginning of the trouble.

The *treatment* at first was directed toward improving her general health. At the end of only one week she had gained so much, and felt so much better, that it was deemed advisable to begin a systematic and graduated course of gymnastics and massage. She received one thorough general massage three times a week, and a local one applied to the neck only every day for the first two weeks. For the following two weeks of the treatment general massage was applied twice a week, and local massage to her neck four times a week. The strictest attention to diet was constantly observed; her appetite improving wonderfully during that time. Besides massage she was enjoined to take active exercise, which consisted in swinging a bar, which she grasped with both her hands and threw out in different directions a certain number of times, according to her powers of endurance. While performing this exercise she was directed to look constantly at a certain object a short distance in front of her, and so placed as to keep her head and face in the middle line when looking at it. For the purpose of exercising the lower limbs she was made to pace the floor after the manner which is best calculated to reach all the muscles of the lower extremities, as well as those of the lower portion of the trunk, and keep them all in active exercise. During any and all of these exercises she was never allowed to put her hand to her head to steady it. From the second week on, she was ordered to take daily walks out of doors, observing the same rules as during in-door exercise.

The exercise and other treatment were continued, and when I saw her the following September, meeting her on the street, she looked a perfectly healthy woman. It is now nearly a year ago, and every occasional letter I receive convinces me of the permanent success of this treatment in her case.



## THE TREATMENT OF SEVERE ELECTRIC SHOCK.

Dr. C. G. DE SCHWEINITZ, of Philadelphia, has recently reported two cases of severe electric shock which recovered under expectant treatment; and an exchange (the name of which we cannot now recall) commends the expectant method in these cases, on account of the fact that we are as yet ignorant of any medical treatment which promises success. In the *Medical Record*, for January 31, 1885, Dr. W. G. Eggleston, of Philadelphia, reports three cases of this nature which fully recovered under treatment by atropia and stimulants. As may be seen by reference to the latter article, the persons were profoundly shocked and insensible for some hours, that the respiration and pulse were abnormally slow, and that death from dyspnoea or heart failure seemed not improbable; and that these symptoms were relieved and finally dissipated by the treatment adopted.

As persons have been known to die from the influence of electric shock some hours after the reception thereof, it seems that any treatment which will relieve the system of its influence should be adopted; and from the prominent symptoms in these cases—dyspnoea and threatened heart failure—there is scarcely a doubt that atropia is a physiological antidote to the influence of electricity; and that its effect is aided by the administration of such stimulants as brandy and ammonia.

Appropos to this subject, it may be mentioned that a recent number of *La Lumière Électrique* states that Prof. Dolbear has found that wires carrying currents of high tension may be safely handled if the hands be thoroughly covered with oil. With gloves thoroughly impregnated with oil, he thinks that wires carrying a current of 80,000 volts may be touched with safety.—*Jour. Amer. Med. Ass'n*, March 14, 1885.

## DISEASES OF THE ORGANS OF RESPIRATION.

## PNEUMONIA IN HIGH ALTITUDES, AND ITS TREATMENT WITH JABORANDI.

By J. W. BROWN, M.D., Silverton, Col.

From the *Jour. of the Amer. Med. Ass'n*, March 7, 1885:—The greater prevalence of pneumonia in proportion to the population, and its much higher rate of mortality in mountain altitudes, than at the average elevation of the earth's surface, set the writer, about six years ago, to seek for a plan of therapeutics of greater efficiency than that generally practised and approved. The wonderful diaphoretic power of jaborandi pointed it out to the writer as being possibly a useful agent in the treatment of pneumonia in its early or formative stage, with the view of aborting the disease.

An immediate trial of the drug seemed to confirm the supposition that it might do so, and an invariable use of it for the last five years in the formative stage of pneumonia has been productive of such extraordinarily beneficial results, apparently, that the writer is induced to present the experience and the method to the attention of the medical profession.

There is nothing of originality claimed in this practice, for the result of the action of the drug is identical with the result of the action of the steam-bath or sweat-bath practiced by Thompson and others with the same end in view—the abortion of pneumonia in its formative stage. This resort to an almost obsolete method has been the outcome of necessity in an endeavor to obviate the almost certain death that follows upon a fully developed pneumonia in the altitude of the writer's practice, viz: An elevation ranging from eight to twelve thousand feet above the level of the sea, in the San Juan mountains. An exceedingly high rate of mortality, and a greater pre-

valence of the disorder in proportion to the population than at lower levels, accords, we believe, with the experience of every practitioner of medicine in the mountain altitudes.

Dr. Brown cites four illustrative cases in which he gave jaborandi according to the following prescription.

R. Ext. jaborandi fl. 3 iv; spts. ammon. aromat. ℥40; syrupi simplicis, 3 iv. M. S. One teaspoonful every two or three hours to induce profuse perspiration.

Covered with blankets, etc., maintain the sweating at its highest pitch for about six hours. Then change bedding and clothing, wipe dry and give fifteen drops of the mixture sufficiently often to keep the skin moist.

In the practice of the writer, he feels that pneumonia has lost its terrors even in these high mountain altitudes, whereas before this practice the mortality was great and the doctor overwhelmed with a sense of helplessness. A case of simple pneumonia that would recover without any care, other than that of simple hygienic management, at sea-level, seemed, in these altitudes, to be almost necessarily fatal, and recovery from double pneumonia an impossibility. The only safe way in mountain altitudes is to abort the disease early, before the advent of symptoms indicating asthenia, and this can be done at any time previous to the appearance of asthenic symptoms by the simple method detailed herein; that is to say, limitation of the extent of the solidification may at any time be effected before symptoms of asthenia make their appearance, so that as small a portion of a lung as possible may be rendered useless by solidification.

The excessive mortality in pneumonia at mountain altitudes, over that at the average level of the earth's surface, seems to be due to the rarefied condition of the atmosphere mainly, its chemical composition being the same as everywhere else in open country.

The method described is inapplicable after the appearance of asthenic symptoms, because the mischief sought to be averted is already in existence and is the cause of the asthenia, viz.: a fully developed pneumonic solidification. If it is now too late, the only resort remaining is the method of support and hope, both together, in these mountain heights at least, being inadequate to the making of a lung largely hepatized to breathe a sufficiency of oxygen for the needs of the economy, when in its full capacity this is about all that it can do.

## CONSUMPTION AS VIEWED BY LIFE INSURANCE COMPANIES.

By JOHN L. DAVIS, M.D., Cincinnati, O.

From the *Cincinnati Lancet and Clinic*, April 25, 1885:—The greatest losses suffered by life insurance companies are from consumption; despite the most careful examination of applicants, this one disease is responsible for one-eighth of all deaths among insured lives. The experience of more than forty leading companies proves this. Reliable statistics further show that consumptives, on an average, live out less than one-fifth of their expectancy. Hence insurance companies dread this disease more than all others, not only because it is universally prevalent, but because it is fatal so soon—within five or eight years after the issuance of the policy.

Nor is any age free from the disease; at no period can it be said that a man has become "too old to die of consumption." While the disease is most fatal between the ages of 20 and 40, the mortality at this period is relatively not so excessive as has been imagined.

For the practical purposes of insurance, consumption may be considered under the two classes: the acquired and the hereditary disease.

It is probable that as science more clearly describes the characters of the specific cause of this disease, further measures can be adopted to prevent direct contagion from the organism. The direct transmission of the disease from intimate daily association with consumptives has been demonstrated in innumerable instances. This fact will, of necessity, be more and more

forcibly impressed upon insurance men, and measures will be taken to guard against accepting applicants thus endangered.

The hereditary transmission of consumption is of the first importance to life insurance companies; for while it is almost impossible to fortell the development of cases of acquired phthisis, very much may be done toward eliminating applicants who have a strong hereditary tendency to the disease. And it becomes a question of vital interest to both the company and the applicant how far the disease is transmissible by heredity. Evidences of heredity are found most prominently and unequivocally in connection with the parents of the individual. But it is well known that one generation may be entirely free from evidences of consumption while it appeared in the preceding generation, and makes its appearance in the succeeding one.

In a former paper I endeavored to show that of 100 consumptives, on an average 24 had one or both parents affected with consumption; 20 more had one or more grandparents similarly affected, and 16 more had various other remote relatives affected with the disease. That is, at least 60 per cent. or all cases of consumption may be properly regarded as hereditary, when we include under this term both direct and indirect transmission.

It was further shown in the same paper that mothers transmit the disease oftener than do fathers, in the ratio of about 135 to 100, also that a daughter's liability to inheriting the disease is from 5 to 10 per cent. greater than a son's liability. Hence of the children of a consumptive parent, the daughter would be less acceptable to the company than would the son; and if the applicant's mother were consumptive it would be more unfavorable to his acceptance than if the disease affected his father alone.

No fact in the realm of practical medicine is better known than the universal unwillingness of people to acknowledge the existence of consumption in their families, and the medical examiner is not surprised to find the harshness of the disease variously modified by all manner of evasive and delusive terms. This is done out of a spirit of charity toward the victim and his relatives, and of course criticism would not be proper. But the financial security of life insurance is based on medical facts rather than on sentiment. So when the applicant says his father died of "cold" or his mother of "debility," the experienced examiner understands that these vague terms are employed to hide the too definite names of a dreaded disease.

The applicant for insurance, at the time of examination must be in perfect health, as far as a thorough examination can show; hence, if he have a slight cough, even though it be no more than a trivial subacute bronchitis, or if his pulse rate is fast, or the temperature elevated, however slightly, the consideration of the risk is postponed. It is known that these are among the earliest signs of consumption, and often exists long before the most skillful diagnostician can discover physical lesions in the lungs. Other early evidences of this disease are repeated or continued disorders of digestion and of the assimilative process. Hence a loss of weight, although it may be slight, should excite suspicion. The acceptance or rejection of a risk is based upon all the facts elicited in both the individual and family histories, and unfavorable elements in one part of the examination may be offset by remarkably good features in another. Thus while the family record may be far from good, the applicant himself may present such an appearance of perfect health and such constitutional vigor as to warrant the acceptance of the risk. Again, an applicant with a first-class family history, although his personal examination is not the best, may prove to be a good risk. The most skillful and careful judgment on the part of the medical director, is essential in deciding how much weight is to be attached to every individual factor in the examination; all extenuating and counterbalancing conditions revealed by the medical history must be most carefully appreciated. Upon the grand total of all favorable and unfavorable points in the case, final acceptance or rejection of the risk depends. The delicate question to be settled by the expert is, how long under the given circumstances, will the individual live? A rule among leading companies, based upon their business experience, requires the rejection of any applicant who has had two near relations affected with consumption. If only one relation has been consumptive, the

applicant, with a record favorable in other respects is accepted, though extra rates may be charged. If the father has had the disease, an average of seven years is added to the applicant's age, and he is charged correspondingly high rates. This rule is necessary because experience has abundantly proven that through this single objectionable factor in the family, the individual's chances of living are proportionately impaired. If the mother alone were consumptive, ten years is added to the age of the applicant; for, as has been stated, the mother is more apt than the father to transmit the disease.

The occurrence of consumption in more distant relatives is not usually regarded as warranting extra rates; though of course it diminishes the acceptability of the risk. Yet even in these cases when no extra rate is required, very often some special plan of insurance, more favorable to the company, is demanded to offset the additional risk.

Finally, the occupation of the applicant must be carefully considered. Few influences are more hurtful to the lungs than the dusty atmosphere of the miller, the grinder, the stonecutter, the woodworker, etc. A special form of consumption is so frequently associated with such influences as to be designated as "knife-grinders' phthisis."

Hence, these occupations warrant extra rates, if not absolute rejection of the risk.

Now what is the result of this most searching examination of the applicant, and the careful exclusion of every one who shows any hereditary or predisposing tendency to consumption? Is it a fact that consumption is absolutely eliminated from among policy holders? Not by any means; in spite of every precaution against this disease, statistics show that one-eighth of all persons insured die of consumption. And as a class, they live out only one-fifth of their expectancy; on an average they die six years after the issuance of the policy. This large death rate among insured lives must not, however, be considered as an unfavorable commentary upon the ability of the medical men of insurance companies, as regards either their diagnostic skill or their knowledge of the clinical history of consumption. For, great as is the mortality among policy holders, it makes a very satisfactory showing indeed, in comparison with the death rate from this disease among the general population. The careful selection of lives by insurance companies has reduced their mortality from consumption to just one-half of that among the general population.

The practical application of the facts which life insurance has established are of vast importance. The varied and complex factors involved in the hereditary transmission of consumption have been studied with great advantage; experience has shown that occupation, habit and climate exert a powerful influence in the development of consumption; the interchangeability of this disease with certain others has been clearly demonstrated. Finally, the gravity and significance of individual and conjoined symptoms have been carefully ascertained by life insurance companies. It remains for further study to show in how far consumption is communicable by its specific poison; and we may be sure that life insurance experts will be among the most active and careful in prosecuting scientific investigation in this direction.

#### CONSUMPTION.—ITS CONTAGIOUSNESS, PREVENTION, AND TREATMENT.

By C. HOWARD YOUNG, M.F.S.H., Hartford, Conn.

From the *Virg. Med. Monthly*.—Villemin, in 1869, at Paris, proved that the above disease was contagious; before 1869, Van Swieten, Valsava, Morgagni had suspected and proclaimed it.

We have, to-day, the proven fact of the contagiousness of consumption, demonstrated by Dr. Chaneau, Toussaint, of France; and by Koch, of Berlin, and Klebs of Strasbourg, and others of Germany. Dr. Colin, head of the French Veterinary School at Alford (near Paris), has proved that the virus of phthisis inoculated by the lancet, produces galloping consumption. It is, then, a violent virus.

*Modes of Contagion.*—(1) It is produced from person to person. The sputa dries and is carried by the wind, and so disseminates the bacilli of consumption; (2) By drinking milk from consumptive cows; (3) By eating meat of consumptive animals; (4) The disease germs of tuberculosis are probably carried around, to some extent, by flies, as the cholera bacilli at Genoa and Naples were, according to Italian doctors; (5) By infected clothing and bedding. The writer, employed on the staff of a medical journal at Paris, translated into French a communication from a celebrated English doctor, who wrote about a man who had married three times, the wives dying of consumption. The mattress used was the one used by the first wife, who had inherited consumption. He escaped, being very robust. Consumption is often "inherited" simply because the heir has used old mattresses, woollen chairs, sofas, carpet, etc., containing disease germs handed down with the personal estate.

There are other ways of inoculation, but the above are probably the principal.

*Prevention.*—There should be examiners in every town and village to condemn and seize diseased meat. I believe Paris has thirty-two meat inspectors, and Prussia 22,000! How many has New York?

*Prevention from Danger per Sputa.*—The German Government requires all consumptive soldiers to spit in cuspadores in which chloride of lime has been placed. Restaurants, cafés, and places of public resort, should by law have such disinfected cuspadores.

*Remedies.*—Dr. Bouley, of France, sees a remedy in vaccination with attenuated tubercular matter. He awaits this discovery from Dr. Pasteur, the discoverer of the prevention of hydrophobia, anthrax, silk-worm disease, etc.

*The Rational Treatment of Consumption.*—The disease is to be treated by whatever will kill the bacillus, or consumptive microbes. At present Dr. Bouley seems to recommend the "sulfites alcaloris" (alkaline sulphites). This bacillus of consumption was found by Dr. Koch, the celebrated discoverer of the cholera germ.

*Specifics.*—Now that the cause of consumption has been found to be a living germ, we may hope that a specific may sooner or later be found. In a late number of the *Gartenlaube*, of Germany, which lies before me, I find a celebrated medical writer very hopeful on the subject of this specific. It may be that consumptives will find a specific in elecampane (helenine, or auneé—French). The celebrated Dr. De Korub, of France, claims that it destroys the germ of the tubercles. He inoculated rabbits with phthisis, and they died; others, inoculated in the same way, but treated with elecampane, recovered. Finally, he introduced elecampane in tubes containing the bacilli of consumption, and the germs died. Pills and syrup of elecampane (helenine d'essence d'auneé) have been used lately in Paris hospitals, and the medicine is spoken favorably of by the French Académie de Médecin. Eleven French medical journals speak well of the merits of this medicinal plant, which was much used and highly praised a couple of centuries ago. Personally, I ordered from Paris pills of the above plant, and have used slightly a decoction of the root with some good results. According to an old book (*Gerades Herbal*, 1638), which I found lately in the Watkinson Library, in Hartford, "Elecampane root, taken with honey made in an electuary, cleanseth the breath, ripeneth tough phlegm and maketh it easier to be spit forth, and prevaileth mightily against the cough and shortness of breath, comforteth the stomach and helpeth digestion."

## THE CONTAGIOUSNESS OF TUBERCULOSIS.

By WILLIAM H. WEBB, M.D., Philadelphia, Pa.

In a paper read before the *Coll. of Phys. and Surg.*, Philadelphia, Dr. Webb gives the details and the results of his experiments with germ traps used in detecting tubercle bacilli in the air of places of public resort. He concludes his paper with the following positive statements:

The discovery of the tubercle-bacillus is a scientific fact; all, with the same facilities, may see what others have seen. It is the one thing tangible, describable, known by its peculiarities among entities as readily as one individual is known from another. To doubt its existence in tuberculosis is to doubt the utility of scientific medical research, and to abandon further progress to the unstable dreams of theorists. The sputa of the phthisical contain these germs; the air they exhale is loaded with them or their spores, and their introduction into the system of animals will always produce tuberculosis, *while nothing else will*. These are not speculations, but demonstrable facts! Furthermore, clinical observations go to prove conclusively that healthy individuals, living in an atmosphere contaminated by the phthisical, will contract this disease, and not any other which might be due to a lowered vitality, from being in close quarters and breathing a vitiated air. That there is yet much to be learned in regard to the tubercle-bacillus, there can be no doubt. Still, having made a wide breach in the walls that hemmed in the mystery of tuberculosis, it behooves us to press on to its complete solution.

I feel that I would be recreant to the cause I have espoused did I not avail myself of this opportunity to state that, in more than one instance, in articles recently published, the non-contagionists, it seems to me, have wilfully, unhesitatingly and without warrant, perverted the language, even absolutely falsifying the statements, of authors they quote in support of their cause. That such reprehensible practices should be resorted to, for what must necessarily be but a momentary triumph, is of itself strong evidence of the vulnerability of their position, and requires no word of condemnation from me; nor would I think proper to notice it at this juncture, were it not to point out the necessity for all conscientious investigators to verify every and all citations by referring, wherever possible, to the original documents.

### A SUMMARY OF TWO HUNDRED AND FIFTY-TWO CASES OF LOBAR PNEUMONIA.

By EDWIN T. DOUBLEDAY, M.D., Med. Clin. Registrar to the N. Y. Hosp.

From the *Medical Record*, March 28, 1885:—There were 201 males and 51 females. The largest number of cases occurred between the ages of 20 and 80 years—namely, 70 males and 18 females. Chill was absent in 58 cases, present in 179, and not stated in 15 cases. A distinct and well-marked *crisis* occurred in 38 cases. The temperature of those who recovered ranged from 100° F. to 104.5° F.; few recovered when the temperature rose above 105° F. The right lung was involved in 135 cases, the left in 76 cases, and both lungs in 41 cases. Of the double pneumonias, all cases, 14 recovered.

TREATMENT.—Aconite has been used in a few cases. Quinine has been used extensively. When given early it was apparently of marked benefit in giving a mild form to the pneumonia and in a very few cases cutting short the disease. When given late, in large doses (gr. xv. to gr. xxx.) for reducing temperature, it has had, in some cases, a marked depressant action on the heart. When the case came in before consolidation had taken place, a dose of calomel (gr. v. to gr. x.) was frequently given. I have seen typical physical signs of the stage of congestion (crepitant râle, etc.) in two cases disappear under this treatment. For the delirium, the bromides, chloral, and morphia, very sparingly have been used. For pain, opium, generally in the form of liquid Dover's powder. For dyspnoea, small doses of atropia, quebracho, dry cups, and when the consolidation is extensive (double pneumonias), inhalations of oxygen (cii. to cv. p. r. n.). For stimulants and heart-failure, ammonium carbonate (gr. v. q 3 h.), fresh tr. digitalis (gtt. v. to gtt. xx. q. 3 h.), and alcohol. Patients are generally put on stimulant treatment as soon as admitted, and the alcohol is rapidly increased as long as the pulse remains poor and the tongue dry, or until the breath becomes alcoholic. Whiskey is the form of alcohol used. The amount of alcohol needed varies much. Some cases required twelve to

eighteen ounces in the twenty-four hours. Lately antipyrin has been used for high temperature. It was given in powder gr. xxx.; and, at the end of an hour, gr. xv.; if required, gr. xv. were given at the end of the third hour. It sometimes caused slight sweating and slight cardiac depression. It gave rise to no gastric disturbances. Temperature fell one to three degrees and staid down one to eight hours. The antipyrin was used in twelve cases.

### THE SWEATING OF PHTHISIS.

By E. L. SHELLEY, M.D., Prof. Laryngology and Clin. Med., Detroit Med. Coll., Mich.

From the *Medical Age*, March 25, 1885:—The sweating of phthisis is often a very troublesome symptom. It is generally considered one of the elements of hectic fever. It has been termed nocturnal because of its prevalence during the night. It oftener occurs toward morning, although in the advanced condition of the disease perspiration will take place whenever the patient falls asleep. Earlier in its course I do not think it a good plan to interfere with the perspiration too much. It seems to be a compensatory process for getting rid of excretions, which, as some believe, should go off through the pulmonary surface. When, however, sweating has gone far enough, then something must be done to check it; even though an extra burden be reverted to the disabled lungs. One of the oldest and most efficient remedies is *aromatic sulphuric acid*, and it may be administered in doses from ten to fifteen or twenty drops well diluted with water three times a day. In addition, the surface of the body may be sponged with a weak solution of acetic acid, or very dilute sulphuric acid. I much prefer, however, a sponge bath of a solution of common salt. *Belladonna* in some form or other is perhaps the most efficient of all remedies used for this particular symptom. It may be administered as fluid extract or tincture, or what is better a small pill of the alkaloid (atropine) one-sixtieth of a grain every evening, care being taken to stop its administration as soon as the physiological effects on the throat and pupil become manifest. There are some persons to whom this drug cannot be administered at all on account of idiosyncrasy. A recent remedy which is highly spoken of, but which I have had no experience with, is a tincture made with common house cobweb. It is said to be efficient where mineral acids and belladonna fail. Tonic doses of iron and quinine sometimes effect the abatement of this symptom with or without sponging or picrotoxin. Some patients will beg to be sponged off after every attack of sweating, while others will persistently resist through fear of "taking cold." I think, however, in all cases where the perspiration is excessive that the body should be sponged once a day. This operation should not be repeated too often in any case.

### SYPHILITIC PHTHISIS.—DOES IT EXIST?

Dr. FREDERICK S. SHATTUCK, of Boston, in his report on Progress in Medicine, published in the *Boston Med. and Surg. Jour.*, March 5, 1885, quotes from Hiller and says:—It has long been known that syphilis may attack the lungs; but a vast deal more has been heard of pulmonary syphilis since the question was broached whether the direct cause of the characteristic lesion of phthisis—caseation and cavity formation—may not sometimes be the venereal virus: that is to say, whether there is not also a syphilitic phthisis.

After a careful critical study of all the literature of the subject and also of three cases under his own observation, Hiller concludes that there is, as yet, no clear scientific proof of the existence of such an affection. In the reported cases of syphilitic phthisis sufficient evidence is lacking either of the destructive and ulcerating nature of the pulmonary process or of the syphilitic origin of the same. Those cases in which the diagnosis was apparently confirmed by the autopsy were really simply combinations of syphilitic with either phthisical or bronchiectatic lesions.

The anatomical changes in the lung chargeable to syphilis are cicatrices, connective-tissue growth, gummata, and chronic induration of the pulmonary tissue in the form of peri-bronchial growths, nodular formations, and diffuse lobular condensation, which generally start from the bronchus of the part (diffuse syphilitic infiltration).

The diagnosis of these changes during life may be made with a certain degree of probability at times, but can never be made with certainty. The shortness of breath, cough, scanty and sometimes bloody expectoration, and other signs, rational as well as physical, are so wanting in characteristic peculiarities that the syphilitic nature of the affection cannot be made out from them. The diagnosis is to be based rather on the history of the case, the presence of well-known symptoms of general syphilitic infection, and laryngoscopic examination, which will reveal in nearly all cases of pulmonary syphilis old lesions of the upper air-passages.

#### TREATMENT OF NASAL POLYPI.

Dr. RICHARDSON, in the *Æsclepiad*, recommends the use of sodium ethylate in the treatment of nasal polypus. The caustic agent is applied by means of a probe made of soft cotton-wool, twisted into shape on the points of a pair of forceps. This cotton probe is saturated with the ethylate, and then plunged into the substance of the polypus. On removing the cotton it commonly happens that the patient can expel the whole mass of destroyed polypus, in a semi-fluid form, by blowing the nose sharply. A second application ought to be made with a view of destroying the base of the polypus. The mode of action is said to be sufficiently clear. The ethylate is decomposed by contact with the water of the polypus into caustic soda and alcohol; the latter coagulates the albuminoids, and the former acts as a powerful caustic. With the exception of some burning pain, no unpleasant effects seem to follow the use of this method.—*Western Medical Reporter*.

### DISEASES OF THE ORGANS OF CIRCULATION.

#### ELECTRICITY AS A STIMULANT IN RESPIRATORY AND CARDIAC FAILURE.

By GASPAR GRISWOLD, M.D., M.R.C.S., of New York.

From the *N. Y. Med. Jour.*, April 4, 1885:—Electricity has long been conspicuous among the agents recommended for the treatment of sudden prostration, attended with respiratory and cardiac failure. It will be the object of this paper to inquire how far the usual methods of applying electricity in cases of collapse are in accord with what is known concerning the physiology of the heart.

Can electricity be so applied clinically as to stimulate the heart? To answer this question, let us turn for a moment to a short synopsis of the cardiac mechanism (which was given).

To recapitulate: *The heart beats as a result of impulses arising in its own substance. The action of the pneumogastrics is always inhibitory. The "accelerator nerves" increase rate at the expense of force, and retard the circulation instead of assisting it.*

The question, *Can electricity be so applied clinically as to stimulate the heart?* must, therefore, be answered in the negative.

When we come to discuss the action of electricity as a *respiratory* stimulant we must admit at the outset that stimulation of the phrenic nerves causes contraction of the diaphragm. With this end in view, electricity may be applied in two ways: 1. A mild current may be applied *continuously*, with the idea merely of making the inspiratory acts deeper and more efficient, without par-



ticularly affecting their rhythm. 2. A current may be applied of sufficient strength to at once cause a deep inspiration, and the application be *repeated at intervals of three or four seconds*. There is abundant evidence that good results have been obtained by these methods, especially the first; these good results have been, for the most part, described in reports of cases of opium poisoning. On both physiological and clinical grounds, therefore, *if we consider stimulation of the phrenic nerves as a measure by itself*, we must accept it as a proper and logical treatment in respiratory failure. But we can scarcely consider electric stimulation of the phrenic nerves by itself, therapeutically, for reason that the phrenic and pneumogastric lie so near one another in the neck, equally superficial and not more than half an inch apart, that it is impossible to apply electricity to one of them without simultaneously affecting the other. We cannot apply electricity to the phrenic, to stimulate the contractions of the diaphragm, without at the same time applying it to the pneumogastric, whose function it is to retard and even stop the heart. *The identical measure, therefore, by which we aim to assist respiration may, simultaneously and without warning, be the means of stopping the circulation.* This consideration becomes even more significant when we reflect what mild currents of electricity are sufficient to excite the inhibitory influence of the pneumogastric upon the heart.

In face of these facts, the following conclusions seem justified: 1. Electric stimulation of the phrenic nerves should never be undertaken without the reflection that the current will at the same time reach the pneumogastrics. 2. Only mild currents should be applied, their effect upon the heart's action being carefully watched. 3. Especially should be avoided the sudden or careless application to the neck of a current sufficiently strong to produce pain or muscular contractions in other parts of the body.

It will be a further object of this paper to inquire if there be not some varieties of poisoning in which the danger of cardiac depression from stimulation of the pneumogastric is so great as to contra-indicate any attempt to apply electricity to the phrenic.

Experiments go to show that the tendency to cardiac paralysis from stimulation of the pneumogastrics is *not* increased in aconite poisoning. Indeed, in the latter stages of poisoning there is no danger in stimulating the pneumogastrics, for they are so paralyzed that no current applied to them has any effect upon the heart. In the treatment of aconite poisoning, therefore, the application of electricity, with proper care, to the phrenic nerve, is perfectly safe.

When heart failure occurs early in *chloroform* administration, the pneumogastrics are still normally excitable. At such a moment, even a very mild electric current applied to the pneumogastrics will instantly paralyze or fatally depress the heart. It is therefore eminently dangerous to apply electricity to the neck of a patient with heart failure from chloroform. The application over the phrenic of a current strong enough to cause contraction of the diaphragm would be almost certain to cause fatal cardiac depression.

That in asphyxia from *etherisation* the heart can stand stimulation of the pneumogastrics as well as it can in health. Therefore it is safe to stimulate the phrenic nerve in ether poisoning with a current as strong as the patient could bear under normal conditions.

In opium poisoning, when the heart is rapid and feeble, there is even less danger than in health of cardiac paralysis from stimulation of the pneumogastrics. It is, therefore, safe to carefully apply electricity to the phrenic nerve in opium poisoning.

When morphine is injected into a vein, the heart is easily depressed by electricity applied to the pneumogastrics. It would *not*, therefore, be safe to faradize or galvanize the phrenic in this condition.

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#### A METHOD OF AVERTING SYNCOPE.

It is well that we should always be prepared to avert what may or may not prove to be a serious, or even fatal, syncope. In persons whose hearts are

weak, fainting or syncope is not at all uncommon, and may be produced by very slight causes. Hence we reproduce the concluding paragraph from an article on the subject by Dr. Wm. J. Notely, in the *Lancet*, March 14, 1885.

"Now, in all cases where the syncope is not complete, and where the heart continues to act, though feebly, measures are taken to restore the patient by adopting such means as are calculated to strengthen the action of the heart and facilitate the flow of blood to the brain. In many cases a person accustomed to faint from slight causes will be able to avert the syncope by adopting such means, and it is for this purpose that I wish to draw attention to the efficacy of heat applied to the head. In a person with a weak heart, syncope may be produced by simply sitting with the feet in hot water, and, in like manner, it may be averted by application of heat to the head. Anyone may convince himself of this by first producing faintness in himself artificially. This may easily be done by getting into a bath of about 110° F. In a few minutes he will begin to feel faint. Let him then plunge the whole of his head except the nose and mouth beneath the surface of the water, and in less time than it has taken to bring on the faintness all the disagreeable sensations will cease, and he will now be able to continue in the bath, perhaps for half an hour longer, without any inconvenience. From this it would appear that the application of heat to the head is a measure of some value in averting a threatened attack of syncope.—*Med. and Surg. Rep.*, April 11, 1885.

### IDIOPATHIC ANÆMIA.

By J. H. MÜSSER, M.D., Philadelphia, Pa.

From the proceedings of the *Philadelphia County Med. Soc.*:—Dr. Musser gives the history of three cases with remarks and an analysis of the cases hitherto published in America.

1. *Etiology.*—It is of interest to note in Case 1 the possible relation of the development of the disease to shock, as observed by Dr. Curtain, whose views have been anticipated by others. The age and sex of our patients presented some variations from the usually accepted averages of the Germans on these questions. Two males beyond forty, and one female, mark them. The dyspeptic attacks possibly had some casual influence in Case 2. But the cause of the third case is quite obscure. None of the cases were deprived of food or suffered any want.

2. *Appearances of the Blood.*—As has been noted by Professor Osler, the Max-Schultze's granules are absent in idiopathic anæmia. The extreme reduction in red cells, the changes in size, shape, and color, the adventitious cells (nucleated corpuscles), and the absences of Max-Schultze's granules, therefore, characterize the blood of the disease.

3. *The Urine.*—Urea is said to be lessened, uric acid relatively increased, and phosphoric acid and the chloride of sodium diminished in idiopathic anæmia.

4. *Sympathetic Nerves.*—The evidence has not been sufficient to point to the sympathetic system as the primary organic affection in this disease.

5. *Bone-Marrow.*—In some cases (Pepper, Osler, Cohnheim, Scheby-Buch, Hughes, etc.) of so-called idiopathic anæmia, the marrow of the bones was seen to have reverted to its foetal structure. In our cases this reversion was notably absent, the yellow marrow not being replaced by red marrow.

6. *Blood-Clots.*—Attention should be called to the black specks, or possibly pigment granules, in the blood-clots found in the heart. It is to be regretted their exact nature was not determined, and this remark was made in order that they may be looked for by future observers.

7. *The Chemical Examination of the Blood.*—The most striking feature is the reduction of iron in the blood.

8. *Course and Termination.*—Relapses are extremely liable to occur in persons apparently cured of this affection. Caution should be used in pronouncing a cure.

The English and Germans, most deservedly, have been accredited most of the honor for establishing this disease as a distinct clinical entity. It is

almost beyond cavil that Addison was the first to distinctly impress on the profession the clinical and pathological nature of this affection as distinguished from like disorders. Others had described isolated cases, there is no doubt, but he had fixed it, so to speak in nosology. At the same time the labors of our own countrymen, very early in the history of the disease, are worthy of serious attention and high honor.

### CAFFEIN IN HEART DISEASE.

RIEDEL, after extended trial of this remedy and its preparation, formulates his conclusions as follows: (1) Caffein is a heart regulator and diuretic in the same sense that digitalis is. (2) Caffein in suitable dose and form increases the power of the heart, slows its action, and increases arterial tension, producing this effect soon after its administration. (3) Caffein acts rapidly as a diuretic. (4) The indications for the use of caffein are in general the same as those for the use of digitalis. (5) Caffein is best administered in small and frequently repeated doses. In most cases one to one and a half grams of the double salt daily is sufficient, though it is safer to begin with smaller doses. (6) The main difference between the effect of caffein and that of digitalis is that the former is much more prompt and is not cumulative. (7) In many cases in which digitalis fails caffein will succeed. (8) It is not advisable to give morphia at the same time with caffein; the latter, in that it restores the failing compensation, is practically a narcotic in these cases. (9) Caffein, and especially its soluble salts, sodio-caffein benzoate, salicylate, and cinchamate, the solubility of which favors their subcutaneous use also, are as a rule, better borne than is digitalis.

Becher's results are not materially different from those of Riegel. Diuresis goes hand in hand with the tonic effect of the drug upon the heart, and this observer also found that caffein succeeds sometimes when digitalis fails. He does not seem to have used the double salts, but thinks that of the more common preparations the hydrobromate is less likely to make the patient wakeful.—*Boston Med. and Surg. Journal.*

### DISEASES OF THE ORGANS OF DIGESTION.

#### BRUNTON'S LETTSOMIAN LECTURES ON "THE DISORDERS OF DIGESTION."

By J. MILNER FOTHERGILL, M.D., Lord. Eng.

From the *Philadelphia Medical Times*, March 7, 1885.—Dr. Fothergill gives one of his unique letters in which he says: When Brunton has anything to say the medical world listens attentively. When it was announced that he was to deliver the Lettsomian Lectures this year on "The Disorders of Digestion," all knew that they would add to their knowledge on the subject by attending. All who set up for special knowledge about the digestion and its disorders pricked up their ears,—the writer, it is needless to say, among them. The lecturer led off by pointing out the effects of cooking the food and the advantages man derives from being a "cooking animal," preparing his food for the digestive process. (It is a curious thing that raw meat, so much advocated by some doctors, has no advocate among those who study the digestion.) Man could not be turned inside out like some of the lowliest forms of life, but the intestinal canal is still but a modification of the general tegument, and so long as food is in the intestinal canal it is not actually in the body. To pass through this intestinal skin the food must be rendered soluble: that is an essential step. Disintegration precedes solution, and so food must be masticated to prepare it for the action of

the gastric juice. He then spoke of diffusibility, and brought out an interesting point. Some bodies have a very high molecular weight, as hæmoglobin, where each molecule consists of over one hundred atoms of carbon to start with. Such bodies pass with difficulty through an animal membrane, while substances of small molecular weight readily diffuse. Hydration or solution involved the conversion of the food into substances with smaller molecules. "Between the large molecules forming the myosine and starch of the beefsteak and bread, and the small one of peptone and maltose into which they are transformed during digestion, there are a number of intermediate products." This is a new light from a fresh quarter. We begin to see a little more clearly how it is that dextrin and maltose may feed some persons when other food of allied chemical composition fails. In some cases of enfeebled digestion some malt extract may be the only food which can be assimilated; and in one case where I prescribed a teaspoonful of malt-extract each hour, the patient made a brilliant recovery from a very hopeless-looking condition. Maltose is very palatable, which (to my mind) is more than can be said for peptones, and there are conditions of asthenia and acute disease where a combination of the two may be strongly indicated. "True peptones diffuse very easily through animal membranes, and in this respect they differ very greatly from other forms of albumen." Peptones may not be palatable, but they may have their utility all the same. Then he pointed out how soup comes to be the first item of our dinner. Now for the practical application of this. Every sufferer from actual gastric indigestion ought, according to theory, to take a small cupful of meat broth into which has been stirred some biscuit-powder or malted food ten or fifteen minutes before taking a meal at all heavy. (I am certainly going to give the plan a practical trial.) "Next to the soup usually comes fish, which is digested more easily than butcher's meat. I have already mentioned more than once, that the rapidity with which anything dissolves depends very much on the fineness with which it is divided. Now, this is quite true of the different kinds of meat. Beef is acknowledged to be less digestible than mutton, and mutton less digestible than fish. The breast of a chicken is also reckoned to be very digestible. The muscle-fibres in fish are arranged in flaky masses, and not only are very short, but are readily separated from each other." Soup, fish, and the breast of a chicken are a typical dinner for the ordinary dyspeptic who cannot eat anything. A milk-pudding, especially if prepared with broken captain's biscuit instead of raw, uncooked starch, might fitly follow. And then Tom Carlyle, confirmed dyspeptic as he was, might have been amiable; but it is to be feared that he did not "regulate" his diet.

In the second lecture he dealt with *indigestion and biliousness*. Of the latter he said, "The condition which we term biliousness is, in all probability, of complex origin. Its name points to the liver as its source, while its close connection with disturbances of the stomach might lead us to ascribe a gastric origin to it. The difficulty we have in ascertaining the exact causation of biliousness is no doubt largely due to the fact that disturbance of the liver affects the stomach and intestines, and disturbance of the stomach and intestines affects the liver. Indigestion and biliousness are, therefore, so closely associated in many cases that we can hardly say where the mischief begins, unless we can trace it from its commencement, although in other cases we get a clue to the primary origin of the disease by noticing whether the disturbance of function is greater in the stomach or the liver." There is a great deal of truth in this, and to discover which does come first is a great matter in giving direction to our line of treatment. According to the state of dilatation or contraction of the hepatic capillaries is the flow of blood in the portal vein. If this be checked, then there is venous congestion of the portal radicles. (When one reflects on this, one can see, with the mind's eye, how a blue pill at night and a dose of sulphate of soda next morning may unload the liver and expedite the flow of blood in the portal vein.) As to the relation of flatulence to heart-disease, he says, "My friend Dr. Mitchell Bruce has called my attention to the frequency with which such patients complain of 'heart-wind.'" If flatulence be linked with venous congestion of the intestinal mucous membrane, it is but likely that heart-sufferers should

be flatulent. Then he explained the expression "He swallowed his grief." Depressing emotions cause a feeling of constriction (*Beklemmung*) by irritating the vagus, and swallowing abolishes for the time being this action of the vagus. Indigestion is often accompanied by flatulence, and also acidity. Sometimes the two alternate, as in Ewald's patient who said that "sometimes he had within him a vinegar-manufactory and at other times a gas-works." The feeling of acidity is not always actually excessive acidity, but the acid contents of the stomach irritate the cardiac end of the œsophagus. Fatty acids certainly do, and so produce cardialgia (heart-burn). At times the contents of the intestinal canal are too acid, as seen in the possetting of milk, the flatulency and acid mucus so often found together in babies. When the stomach is distended with gas, the sensitive cardiac end of the gullet is drawn open, and so the acid contents of the stomach come in contact with it. The association of piles with hepatic disturbance and congestion of the portal vein was then pointed out. Of course this suggests the relief of piles by acting upon the liver. Then he showed how temporary glycosuria and albuminuria may be the resultant accompaniment of disturbances in the digestive viscera. He said something on the topic which made some of his audience "sit up." It was this: "If we were to assume that because albumen is present in the urine the individual is suffering from serious disease, we should fall into as grave an error as if we were to suppose that every patient whose urine contained sugar was necessarily suffering from diabetes." He then spoke of some maladies linked with indigestion, and pointed out the relations of asthma to digestion. Then came "stomach cough," where the fauces or pharynx become congested. He knew one case where a paroxysm of coughing was synchronous with an attack of gastric acidity. He next spoke of another case: "A gentleman suffered from cough which gave him a great deal of trouble: the back of his pharynx was congested, and I ordered him a gargle. He used this for some time without benefit, and then, for some reason or another, somebody gave him several blue pills, and the cough disappeared." Disturbances of the action of the heart from digestive troubles, and especially when accompanied by flatulence, are very common. Then he proceeded to put the liver in its true place in the human economy, giving it a very high one. When the liver is working abnormally, then all is saturated with gloom; and if a man wishes to live on comfortable terms with himself, an efficient liver is as important as a clean conscience. That toxic "liver stuffs" produce depression and headaches and giddiness (gastric vertigo) there is no doubt.

In his last lecture Dr. Brunton spoke of the treatment of disorders of the digestive organs, which was also of high interest. There was one matter on which, however, I venture to hold an opinion differing from his. He spoke of Austin Flint's recent remarks about the unnecessary attention to the "regulation of their diet" by dyspeptics, pointing out that many dyspeptics are practically half starved because they are so afraid of taking food that they often go without any. This is quite true; so also is the statement that many become unnecessarily timid, and are afraid of food which will do them no harm. But from some familiarity with the subject I have found that to be able to give a dyspeptic a variety of suitable food means a long, hard, persevering study of foods, from "baby foods" upward, and probably can only be undertaken by a person endowed with unusual digestive powers. The dyspeptic needs variety just as much as other persons, but the variety lies within comparatively narrow limits, and a sufficient acquaintance with the dietary suitable for a dyspeptic has cost me as much trouble as anything I have ever encountered in medicine. It involves personal trial of all the varieties of natural foods and prepared foods, and knowledge of the best way to serve them. But it is ungracious to pick a hole in such admirable lectures and to set myself in antagonism to two such eminent authorities. The lectures will soon appear in the form of a book, which is certain to command a large sale on your side of the water; for his digestive organs are undoubtedly the weak point in the modern American.

## FOOD VIEWED FROM A THERAPEUTICAL STAND-POINT.

By W. M. HERRICK, M.D., of Freehold, N. J.

From the *New England Med. Monthly*, March 15, 1885:—We are told that food is: "What is fed upon, that which goes to support life by being received within and assimilated by the organism of the animal or plant." Medicine is defined as being: "Any substance administered in the treatment of disease." There are substances, then, which can be said to be medicines or food or both. Cod liver oil, for example, "goes to support life by being received within and assimilated by the organism," and yet it is a substance frequently "administered in the treatment of disease."

First. Food may necessitate the use of medicine.

Secondly. Medicine may abolish food.

Thirdly. Certain foods, in certain diseases have medicinal properties.

That food may necessitate the use of drugs is such an axiomatic expression, and we see so many evidences of it in our practice that it seems almost a waste of time, or a desire to see ourselves in print to attempt any expansion of such a topic. Yet it is not a month ago that a young man presented himself to me suffering from chronic diarrhoea, who had been under the care of two physicians, both of them above the average, and yet neither of them seemed to be impressed with the thought that his diet produced or aided in keeping up this disease. In reading the able article read by Dr. Flint Nov. 20, 1884, before the N. Y. State Medical Association I was surprised to see the following statement made; "As it is impossible always to graduate with exactness the quantity of food to the digestive, assimilative, and nutritive powers, it is evident that the quantity must often exceed or fall below the capabilities of the processes relating to nutrition. Now of the two evils which is the less? I answer, an overplus of ailment, inasmuch as nature provides for a redundancy more than for a deficiency of alimentary supplies."

The Editor of the *Medical News*, in an editorial on this paper of Dr. Flint's remarks: "Not every one will agree with the author when he says that it is better to overfeed than underfeed, for the dangers of the former plan are often obvious in disturbances of an already enfeebled digestion." Do not understand me to underestimate the value of food in the treatment of disease. I believe it to be an essential part of the treatment; but if I have learned anything from personal suffering from severe indigestion, and studying disease in its various forms, acute and chronic, it is this, that it is far better to somewhat under than overfeed.

Medicines may abolish food.

This too may seem to be a useless affirmation, yet is it not a frequent occurrence that patients are injured by the drugs they are taking? Not that the medicine may not be accomplishing the looked for effects but that in doing so the system is deranged and the appetite destroyed. Digitalis may stimulate and give force to the heart, but at the cost of the digestion. Deranging the stomach, it may lead to disgust of food. Where the continued use of a drug works great havoc with the digestion then, even though the medicine fulfils the expectations for which it is given, yet it should be at once withdrawn.

I do not think this doctrine can be too forcibly impressed, and I was delighted with Dr. Flint's remarks on this subject. He says: "Another fundamental principle is that the immediate lethal agency, when disease destroys life by slow asthenia or exhaustion is chiefly innutrition. Graves acknowledges indebtedness for the suggestion of his plan of "feeding fevers" to a country doctor, who said that he seldom lost patients with fever, provided they were not allowed to die of starvation. Now what is true of fevers as regards the importance of a sustaining diet is equally true of all diseases which kill by slow asthenia. Death is due to starvation, and may be averted if effective assimilation and nutrition be practicable. In all chronic diseases which admit of recovery, this termination is the more assured and expeditious, as a general statement, the better the nutrition is maintained.

The toleration of those diseases which do not admit of recovery and the prolongation of life are promoted in proportion as alimentation can be made conducive to nutrition."

Not unfrequently physicians tell their patients, you must eat your way out of this trouble, and this may be a truth; the great remedy for chronic troubles is the "eating out," but, on the other hand, if not guided in the quality, quantity and frequency of their eating we may be leading them "out of the frying pan only to put them into the fire."

Food may necessitate medicine.

Medicine may abolish food.

How true these propositions are; yet if parents, educated by their physicians, would be judicious in looking after the physical necessities of their children, and of themselves; and physicians would administer medicines only when they were needed, carefully watching for their effects, (good and bad) these aphorisms might and would soon disappear from our vocabulary of medical truisms.

Third.—Certain foods, in certain diseases, have medicinal properties. If we can define medicine as being any substance administered in the treatment of disease we can use them with three objects in view, viz.: Prevention, controlling of symptoms and eradication of the disease, and, thirdly, the restoration of the structures damaged to their normal condition, in other words, repair of tissues.

Certain foods may be given with one or more of these objects in view.

#### IRRIGATION OF THE STOMACH IN ILEUS.

From the *Weekly Medical Review*, March 7, 1885:—Kussmaul has introduced a new method in the treatment of intestinal obstruction and reports four cases in which success followed the above-indicated simple practice after all other measures, such as the opium-treatment and the application of rectal injections, had proven of no avail. The favorable action of the washing out of the stomach is due to the removal of the fluid, when it is withdrawn, of large quantities of fecal matter. Thus the intestine is unloaded, the peristaltic action is quieted, nausea and vomiting arrested and the cleansed stomach rendered capable to retain nourishment. A large, soft stomach-tube is inserted and copious quantities of water so introduced. In one of Kussmaul's cases the obstruction was relieved after a single irrigation, that brought away five quarts of intestinal contents. In another case complete relief was secured after irrigation twice a day for 23 consecutive days.

The observation of the foregoing cases demonstrates that the irrigations may be palliative in all cases, and curative in those that present no insurmountable occlusion.

The palliative effects consist in the relief of the singultus and the feculent vomiting. To this end the method is a rational one and deserves preference to the usual mode of giving opiates, ice, etc. The irrigation not only cleans the stomach but also the upper intestine. It appears that in such conditions of obstruction the pylorus relaxes and the water introduced passes readily into the duodenum.

The directly curative effects Kussmaul explains as follows: (1) The removal of the stagnating intestinal contents relieves the distension of the upper sections of the intestine; the pressure within the abdominal cavity is thus materially reduced, and more room is afforded. (2) Thus the peristaltic action above the obstruction, that was violent and irregular, becomes normal and quiet. (3) The restoration of a normal peristaltic movement may accomplish relief in cases of twist or intussusception, i. e., cases in which the occlusion is not absolute.

Senator adds that when the stomach and the upper small intestine is much distended by irritating fluid and gaseous contents, the peristaltic action becomes paralyzed and the intestine relaxed. The removal of the fluid and gaseous contents, however, restores the normal conditions and normal peristaltic motion in the relieved intestine follows.

#### FLATULENCE.

Mr. T. LAUDER BRUNTON, in the Lettsomian Lectures on disorders of digestion, delivered before the Medical Society of London (*Medical Press and Circular*), speaking of flatulence, says:

Flatulence is due to the presence of gas in the stomach and intestines, which sometimes rolls about, producing borborygmi, or escapes upward and downward, producing eructations or crepitations. If the pyloric orifice be closed, the gas from the intestine will not escape into the stomach, nor gas from the stomach into the intestine; but if the pylorus be open, gas may pass freely from the stomach into the intestine, and *vice versa*. An analysis of gas from the stomach shows that it consists to a great extent of nitrogen and carbonic acid, in much the same proportion as the nitrogen and oxygen of air. It is therefore probable that most of the gas in the stomach consists simply of air which has been swallowed, but from which the oxygen has been absorbed into the blood, and has been replaced by a corresponding quantity of carbonic acid. We are very apt to forget that, although the mucous membranes in man are much specialized, so as to perform a particular function most efficiently, yet their power is not entirely limited to the one function. The diffusion of oxygen and carbonic acid, just mentioned, through the walls of the stomach shows us that the gastric mucous membrane has, though to a very slight extent, a respiratory action; and it is possible that other gases may be absorbed, though to a slight extent, by the gastro-intestinal mucous membrane. Indeed, I need not say it is probable, because we know for a fact that sulphureted hydrogen may be absorbed in this manner. Some authors consider that the gastro-intestinal mucous membrane may secrete gas in large quantities. However this may be—and I think that it does not occur very frequently—it is probable that an interference with the absorption of gases may be a not unfrequent cause of flatulence.

In patients who suffer from malaria, attacks of indigestion are sometimes preceded for two or three days by a tendency to flatulence without any other symptom. This may simply be due to disturbance of the stomach and intestines alone; but still I am inclined to think that in these cases the disorder begins in the liver.—*Louisville Med. News*, March 11, 1885.

### ÆSTHETICS AND PHYSIOLOGY IN EATING.

From the *Medical Age*:—To a greater extent than is, perhaps, wont to be recognized, a man is what his food makes him. Among the causes most operative in the advancement of civilization, may be classed the cuisine. We hear much of the simplicity of our ancestors in this matter, but the fact remains that there is less of fatal illness to-day, and a greater average longevity than ever before. Doubtless we still eat too much and our food is still far from the ideal, but we are improving, and cookery is, without much special devotion to it by the masses, becoming yearly more conformed to the physiological laws which should govern it. In his Lettsomian lectures recently delivered, Dr. T. Lauder Brunton takes up this subject, sufficiently trite to deter the ordinary lecturer, and throws upon it a flood of light.

It is pleasing to note that Dr. Brunton regards the principal meal, as generally partaken of in refined circles, as quite closely conforming to physiological requirements. "Whatever men may be in other things," he says, "they are not mostly fools in regard to the plan of their meals." A plain dinner ordinarily consists of soup, fish, joint, pudding, bread and cheese, and dessert, and the lecturer maintains that there is a philosophic fitness in the order in which these courses are arranged, and in the principal comestibles of which they are composed. The soup is a food and stimulant to the stomach itself and thus prepares it for its task of digesting the food which follows. Schiff found that the stomach of an animal which had some time before digested a full meal, had very little power to digest albumen, and a similar fact was ascertained in regard to an extract made from the stomach itself, this extract hardly acting on albumen at all. When, however, the stomach of such an animal was prepared by the introduction of certain substances, its power of digesting albumen was enormously increased. Schiff called these substances "peptogens," and the most powerful of them he found to be dextrin and soup made from meat. If the meal be begun



with a plate of soup and a piece of bread, the bread partially converted into dextrin in the mouth, and the extractive matter of the meat contained in the soup, on reaching the stomach will be absorbed, and will supply to the gastric follicles the power to secrete an abundance of pepsine. Soup thus acts the part of feeding the steed before imposing on it the burden.

Dr. Brunton then proceeds to show how it is that fish properly follows soup, in the meal. The ready solubility of food constitutes the first and main features of its digestibility, and this solubility consists, in fact, in its facility for being broken up into small particles. The short, flaky fibres of the fish muscles separate and, therefore, dissolve more readily than the longer fibres of the flesh of oxen, or sheep or poultry.

The stomach is thus prepared for the heavier part of the meat, following which, or taken simultaneously with it, are the vegetables, which supply inorganic salts, and probably play a part in the recomposition of the peptones into albuminous material of the tissues after absorption. Bread supplies additional dextrine the cheese albuminoids, and the dessert sweet fruity matter, all of which are useful; and if we remember the effect of mastication and deglutition on the circulation and nervous system, we can at once discover a good reason for this manner of terminating a dinner.

On the question of the use of alcohol as an aid to digestion Dr. Brunton's views will be met with opposition, although if such use be strictly confined to conditions of exhaustion by long fasting or severe exertion, or to those whose digestion is materially weak it is not so objectionable. Dr. Brunton holds it to be one of the most powerful stimulants both to secretion and the circulation. He recommends a glass of sherry and bitters before a meal or a glass of sherry with the soup. During the course a glass of effervescent wine, and with dessert the sipping of a quantity of wine, secures the stimulating effect on the circulation spoken of. The consensus of professional opinion is, however, not in favor of such practice in case of the healthy individual.

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### RECTAL ALIMENTATION.

By C. H. STOWELL, M.D., Ann Arbor, Mich.

From the *Medical Age*, March 10, 1885:—It is barely possible that some of your readers may remember a discussion that occurred a long time ago between the editor of the *Therapeutic Gazette* and myself on the question, What is the limit to rectal injections? I held very positively to the opinion that, in the normal condition, a liquid forced into the rectum could not pass the ileo-cæcal valve; while the editor held to the contrary.

Even at this late day I find it is a pleasure to call attention to some experiments made by Dr. W. W. Dawson, professor of surgery in the Ohio Medical College. These are given in detail in the *Lancet and Clinic*, of Cincinnati, for February 21. The results are: In *fourteen* experiments the valve yielded *twice*. In the remaining twelve cases the colon filled, filled to distension, in one or two instances to rupture, *but not one drop of fluid passed from the colon to the ileum*.

In one experiment he removed sections of the ileum and colon, but he could not pass the valve with either air or fluid. The conclusion he draws is as follows: "The experiments performed show that the valve when intact—when in normal condition—will not allow retrograde passage." In the two cases mentioned above he says, "the valve was, doubtless, imperfect." So, you see, I still hold to the belief that in the normal condition, and as an almost invariable rule, rectal injections of food are *not* carried past the ileo-cæcal valve and into the stomach, for digestion.

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### VINEGAR IN DIARRHŒA AND DYSENTERY.

Premising that Dr. John H. Brinton used to recommend, fifteen years ago, injections of cider vinegar in gleet, we note the following practical contribution from Dr. Amos Sawyer to the *St. Louis Med. and Surg. Jour.*, Jan., 1885:

"About a quarter of a century ago, when giving me some good advice for a young practitioner to follow, the late Dr. B. F. Edwards, of St. Louis, Mo., whose accuracy in the measurement of the action of remedies, truth in statement, and justice toward the members of the profession, made him a shining light in the early history of our State, among other things, says: 'Never make fun of an old woman's remedy, for not only will you give offense and thereby injure your practice to the extent of her influence, but you may throw away what would have proved upon trial to be a valuable adjunct in your practice.' He then cited this case to illustrate the importance of his injunction: 'In 1830, while practicing in Madison county, Ill., I was induced by the representations of an old woman to make the trial, in dysentery and diarrhoea, of tablespoonful-doses of *pure cider vinegar*, with the addition of sufficient salt to be noticeable, and it acted so charmingly that I have never used anything else.' He was prescribing it in 1870, making a period of forty years."—*Med. and Surg. Reporter*, March 7, 1885.

## DISEASES OF THE URINARY ORGANS.

### CHRONIC INTERSTITIAL NEPHRITIS (CONTRACTING KIDNEY).

By ROBERT T. EDDES, M.D., Jackson Prof. of Clin. Med. in Harvard University.

From the *Medical News*, April 18, 1885:—Headache is a very common symptom in these cases. Such a headache is often apparently independent of any cerebral lesion, and is spoken of as uræmic. I doubt the correctness of the name, if it is intended to signify that the pain is caused by an accumulation of urea in the blood. Bartels has shown, that during the most of the period of interstitial nephritis the kidneys are amply sufficient to carry off all the urea that is made. The secreting structure of the kidney, like that of other organs, is more than necessary for ordinary needs, and may suffer considerable diminution, as by the ablation of one kidney or the partial destruction of both, before the obstruction to secretion begins.

What is the cause of this sort of headache we cannot say with positiveness, any more than we can with many other kinds, but when we recollect how prominent a part in the theory of headache has been played by supposed vaso-motor constriction and dilatation, it is quite as easy to refer it to the condition connected with more or less rigid arteries and increased tension, as to a poison circulating in the blood.

It may often be relieved by measures which appeal much more directly to nervous functions than to the excretions, such, for instance, as caffeine, or a small dose of morphia, both of which act too quickly for their beneficial effects to be accounted for by the removal of any excrementitious substance. It might be said that the hot air bath relieves by eliminating substances by the skin which should normally pass off by the kidneys, and in some cases this is no doubt true, and the same remark will apply to pilocarpine; but it must be remembered that the extensive and intense determination of blood to the skin caused by these agencies, produces a notable fall in the arterial tension and may relieve independently of elimination. If we choose to call these headaches uræmic, we must recollect that in many instances we are indulging in a figure of speech which serves only to mark their connection with renal disease, and does not accurately describe their true causation.

Among other nervous symptoms there is one which some of you have seen to perfection in our patient, in the ward, since he was before the class. You know how common a symptom dyspnoea is in such cases. It may be due to effusion of serum into the pleuræ (hydro-thorax), into the lung tissue (œdema), or to congestion of the lungs when the heart is falling. There is, however, a purely nervous dyspnoea, and one form of this is seen in our patient as the so-called Cheyne-Stokes respiration. This is a rhythmical rise and fall of the intensity of respiration, so that if we begin with the period, of apnoea, the respirations, at first barely perceptible, grow stronger and stronger until, after reaching the maximum of dyspnoea (which is not neces-

sarily intense), they gradually fade away again and cease. The complete cycle generally takes somewhere in the neighborhood of a minute, the period of apnoea lasting for from ten to twenty or more seconds. Singularly enough the pulse, during these changes, does not alter its rate or force.

This symptom does not denote, as we at one time supposed, fatty degeneration of the heart, but may be present with that as with other cardiac lesions. It is not uncommon in cerebral disease, and, as you see here and will probably see in other cases, it is not at all an infrequent accompaniment of interstitial nephritis.

### URÆMIA.

By WILLIAM H. DRAPER, M.D., Visiting Phys., N. Y. Hosp.

From the *Med. and Surg. Rep.*, Feb. 28, 1885:—The question arises as to the cause of the convulsions and coma. From the history we learn that the patient was in feeble health before, and she came to the city to consult a physician, and then she was found comatose in her room, with the evidences of having had a convulsion, in the froth about the mouth and the involuntary emptying of the bladder. After she was brought to the hospital she had another convulsion, and has remained in a more or less complete state of coma ever since. There are no signs of any local paralysis, and she moves both sides of the body equally well. There is no facial paralysis, and no difference in the two pupils. They were contracted when she first came in, and were but slightly sensitive to light. But she responded to the test which we have lately used here, and which has proved of some value for diagnosing uræmic from alcoholic coma. That is, by suddenly slapping the patient's face with your hand, there will be some reflex movement in the irides. Besides, the urine was found to be highly albuminous and to contain casts, and this showed the existence of a structural disease of the kidneys. Hence, the diagnosis was comparatively easy. This is not the history of any other than a uræmic coma. But upon examining the patient objectively, we get some further interesting facts. For her hands show evidences of an arthritis in the phalangeal joints, and some also in the temporo-maxillary articulation, and there are some hard deposits in the ears. And I doubt not we would find the same conditions in other joints of the body if we were to examine them. There is complete ankylosis of one elbow, showing that she has for some time been the subject of a gouty arthritis, and it is not improbable that she has gouty or granular kidneys.

Here resort has been had to the safer method of depuration by means of a purgative of castor oil and elaterium. But there has failed to be any response to this treatment, as is not unfrequently the case. This may be due in part to the insusceptibility of the patient to the medicine, or in the case of the elaterium it may be due to the worthlessness of the drug, different samples of which vary much in power. She was also put in a hot-air bath in order to induce sweating. But there was very little response to this, too. It is probable that no medication will do any good here. Her age, 58 years, is against her, and she has probably a degenerated heart, and altogether she is in no condition to recover from such a severe shock to the nervous system. The œdema which occurred two or three hours ago is not an infrequent occurrence, and it is often the precursor and the immediate cause of death.

### THE TREATMENT OF DROPSY BY CONCENTRATED SOLUTIONS OF SALINE CATHARTICS.

By WM. G. EGGLESTON, M.D., of Philadelphia, Pa.

From the *Jour. Amer. Med. Ass'n*, March 28, 1885:—In the *London Lancet* for April 21, 1883, Mr. Matthew Hay gives the details of an interesting case of dropsy treated by the use of concentrated solutions of saline cathartics. During the course of an investigation of the physiological action of saline cathartics on the concentration of the blood, he succeeded in "demonstrating that if the salt be given in a concentrated solution when the alimen-

tary canal contains little or no fluid, it produces an almost immediate and very decided concentration of the blood, owing to the blood becoming deprived of a large amount of its water through the intestinal secretion which the salt excites." He found, however, that this concentration of the blood does not occur if the salt is dissolved in sufficient water, or if the alimentary canal contains sufficient fluid at the time of administration.

The illustrative case given by Mr. Hay was one of ascites from organic heart lesion. A dilute solution of a saline cathartic had been administered a few days before he saw the patient, but with none other than slight relief. He ordered as little as possible food and liquids during the night before the administration of the saline and sulphate of magnesia 3 vj dissolved in two tablespoonfuls of water—no water to be given afterward. The result was that in twenty-four hours after first seeing the case the anasarca was greatly diminished and the dyspnoea almost gone. The purgative action of the salt began in less than an hour after its administration, and there were several evacuations in the course of the next few hours. In a few days the dropsy had disappeared, and there was no return during the month of observation. Mr. Hay remarks that he has found this treatment more useful in general than in local dropsies, and of general dropsies most beneficial in those dependent on a stasis of the circulation, as cardiac dropsy. This remark has induced me to submit the following case, illustrative of the efficacy of this treatment in a local dropsy, not dependent on heart lesion:

Robert C——, æt. 25, came under observation on August 28, 1881. The case was one of pleuritic effusion (Aspiration, with a large needle of a hypodermatic syringe, showed the fluid to be sero-fibrinous). He was ordered to abstain from water and liquid food as much as possible, and to take, the next morning, sulphate of magnesia 3 vj, in less than half a glass of water.

When the patient was seen two days afterward, there was a marked decrease in the amount of effusion. The salt had operated first in about three-quarters of an hour, and during the day there had been eight other large watery evacuations. As the patient said, the water had literally poured from him. Another dose of the salt, 3 iv, was ordered. When seen the next day the fluid was still further diminished, and fl. ext. jaborandi mxx administered, which produced a copious perspiration. Three days afterward the fluid had almost entirely disappeared from the chest, the lung had resumed its functions, and there was no dyspnoea.

The fact noted by of Mr. Hay, that the concentrated saline cathartic removes the fluid both by the intestines and kidneys was noticed in the case of my patient. While sulphate of magnesia produces such an abundant intestinal secretion, there is but little intestinal irritation and systemic disturbance; and its great solubility is a point in its favor, as it is not necessary to take the large amount of water which would be required to dissolve some of the other salines, as sulphate of soda. This rapid removal of fluid by two channels is an important consideration in critical cases of dropsy, and is worthy of a further trial.

### THE DETECTION OF SUGAR IN URINE.

By GEORGE B. FOWLER, M.D., Prof. of Clin. Chemistry in the N. Y. Polyclinic, etc.

From the *Medical Record*, May 2, 1885, a recent writer on glycosuria, says: "It may be as well at this point to note that Trommer's and Fehling's methods are thoroughly satisfactory in most cases where sugar is present, though on the whole the latter is less apt to be misinterpreted." The frequency with which I encounter this error has impressed me with the evident confusion which exists regarding the matter of testing for sugar in the urine. Now, Trommer's test for sugar depends upon the property which grape-sugar has of immediately reducing the oxides of copper in a boiling alkaline solution, and the fact is that *Trommer's test is not applicable to the urine*, except when applied under certain important conditions.

If any one will take the trouble to prepare a *watery* solution of honey, and to some of it in a test-tube add three or four drops of a solution of copper sulphate (gr. xxx. to 3 j.), and then render the whole alkaline by sodic or

potassic hydrate (gr. xxx. to  $\text{℥ j.}$ ), and boil, he will observe the following characteristic changes: When the copper sulphate is added the clear watery fluid simply assumes a greenish hue. When the alkaline solution is added there first appears a light green precipitate (hydrated cupric oxide) which, on the addition of an excess of the alkali, subsequently clears up, giving place to a perfectly clear and beautiful blue solution. On boiling, the whole turns yellow, or orange, from the precipitation of the insoluble red oxide of copper.

Now make a solution of honey *in urine* and proceed to apply the test as before. All will go well until the last step; for, on boiling, the mixture simply loses its blue color, changes to a clear, amber-colored fluid, like the original urine, and shows no precipitate save that of the flocculent earthy phosphates thrown down by the boiling alkali; and the color will be darker than the urine on account of the action of the alkali on the sugar. Just compare the two results. These points have long been known, and yet most of our books persistently disregard them.

Certain ingredients of the urine, therefore, probably the coloring matter, interfere with the reaction of Trommer's test, and the custom formerly was, first to filter the suspected urine through animal charcoal, whereby it is deprived of all color, and will then react perfectly well. But this is rather troublesome. Some years since I directed my attention to the subject, and published a modification of Trommer's test, whereby it can be safely employed in urinary solutions of sugar.—(*New York Medical Journal*, June, 1874, p. 632.)

It consists in taking about five drops of the suspected urine, and to it adding two or three drops of a strong solution of copper sulphate ( $\text{℥ j.}$  to  $\text{℥ j.}$ ). The alkali is carefully poured in until the clear blue color appears, when, on boiling, if sugar is present in appreciable amount, the red oxide of copper will be thrown down. If boiling changes the mixture to a dark transparent urine color, sufficient copper sulphate has not been used. If, on adding the alkali in excess, the pale-blue precipitate of hydrated cupric oxide does not disappear and give place to a clear blue solution, either too much copper sulphate has been employed, or sugar is not present. When either of the two last results are obtained, the experiment must be repeated with varying proportions of the reagents.

Fehling's liquor is a graduated solution of copper sulphate in liquor potassæ or sodæ, and is intended for volumetric analysis, although it is equally applicable for qualitative tests. Taking about a drachm in a test-tube, boiling, and adding the urine drop by drop, the conditions are the same as in my modification of Trommer's. The only precaution necessary with it is always to boil before adding the fluid to be tested, because, on keeping for any length of time, the organic salt or acid which it contains itself reduces the copper sulphate in a manner similar to sugar.

#### EFFECT OF ETHER ON URINARY SECRETION.

Dr. C. H. HUGHES, of St. Louis, in a communication to the *New England Medical Monthly*, says:—Ether douches for local anodyne, antipyretic and antihyperemic influence have been for a quarter of a century a favorite therapeutic procedure with the writer, and, within the last decade especially, have been quite extensively employed for the immediate relief of cerebro-spinal pain and for causing the suspension of acute delirious states, the patient so affected being placed near an open window in a large and otherwise unoccupied room, and the ether being profusely poured on the head and fanned rapidly and constantly away (always from the face) until evaporation is complete and cerebral quiescence is secured, pending the administration of internal tranquilizing agents. This use of ether has been communicated to the profession before. The purpose of the present note is to call attention to an incidental effect of ether douching, viz: The suppression and diminution of the urinary secretion under its frequently repeated use. This effect has hitherto been observed by the writer, but the effect having been transient and

the ether not having to be often repeated in most cases, the occurrence of suppression was attributed to other causes.

But some cases lately observed have convinced the writer that ether long continued in large quantities will suppress the urinary secretion, if care be not taken to prevent inhalations.

The last case in which this effect was observed was a lady over sixty years of age, having accessions of delirium usually without fever, but sometimes with a temperature of 101° F., and insomnia, with a present and previous history of *petit mal*. The applications were intrusted to non-professional hands. The amount of urine secreted fell to six ounces in twenty-four hours. An examination of this urine revealed no marked excess of its salts as shown by specific gravity test. There was no albuminous or saccharine change.

The repeated recurrence of this phenomenon and the prompt return of the normal amount of urine under diuretics and the suspension of the ether applications were convincing.

We find in this fact a new resource in polyuria.

### HÆMATURIA.

By H. RAPHAEL, M.D., Attending Phys. to Bell. Hosp. Out-Patient Department.

From the *N. Y. Med. Jour.*, May 23, 1885:—Hæmaturia, usually defined as a disease characterized by the presence of blood in the urine, is, however, only a symptom, more or less intense in severity, due to a lesion in the vascular system of the genito-urinary apparatus. Although this symptom—bloody urine—is, generally speaking, so well pronounced and distinct, still a correct diagnosis is often attended with the utmost difficulty. Indeed, both the microscopical and chemical tests will often be required to form a correct diagnosis of the location of the lesion.

When the urine has a dirty, reddish-yellow color, it will be found to contain blood corpuscles and some colorless cell structures in considerable quantities. In parenchymatous nephritis the urine is often of a turbid appearance; and a greenish-brown is only met with in markedly alkaline urine containing blood and pus.

Omitting the various tests for the presence of blood in the urine by the aid of the spectroscope and chemicals, which can hardly be done justice to in an article of limited scope. Bleeding in the urinary apparatus may be of three kinds, namely, hæmoglobinuria (or hæmatinuria according to Vogel), capillary hæmorrhage, and hæmorrhage caused by the rupture of a larger vessel.

Hæmoglobinuria is distinguished by the fact that the coloring matter of the blood readily transudes in a soluble form into the urine. The latter is thereby rendered brownish-red in color, and occasionally assumes a varnish-like appearance. Even after allowing the urine to stand for many hours, it will deposit no sediment of blood corpuscles. It retains a uniform and persistent reddish-brown color, because all of the coloring matter of the blood is in solution. Its reaction is usually acid, and its specific gravity diminished.

Capillary hæmorrhages also produces a reddish-brown or brownish-black color, and the urine contains blood-coloring matter in solution. But it is distinguished from pure hæmoglobinuria by a deposit of sediment which consists of blood corpuscles.

Hæmorrhage arising in the urinary passages, due to a rupture of a larger vessel, imparts to the urine a light-red color; in exceptionally severe bleeding the color will even be dark-red, like venous blood. The reaction of such urine is generally neutral; sometimes, however, alkaline, owing to the predominant quantity of the alkaline blood. The urine often contains a large quantity of coloring matter in solution that is manifest when the urine is allowed to settle, and the liquid above the sediment, which consists of blood corpuscles, will be of a clear, pale straw-color. The sediment itself consists of normally-shaped and normally-colored red blood corpuscles. This unaltered condition of the blood corpuscles is due to the fact that the blood and the urine do not remain very long in contact with each other in the urinary passages, the latter not having had an opportunity to affect the former.

# SURGERY.

## OPERATIONS, APPLIANCES, DRESSINGS, ETC.

### LISTERISM AND ANOTHER STEP IN ADVANCE.

By ALFRED C. GIRARD, M.D., U.S.A., Ft. Porter, Buffalo, N. Y.

From the *Buffalo Med. and Surg. Jour.*, April, 1885:—The time for discussion of the usefulness of antiseptics is as much past as the question of the possibility of telephones, and the only war upon it worth considering is that made by men who over-estimate the danger of the means used or wish to see them entirely safe. Of course we do not propose to convince those who labor under the fallacy that Listerism means simply application of carbolic acid to wounds. Such ignorance was excusable some years ago.

For the purpose of preventing the entrance of germs or their contact with the discharges and to destroy them Lister used, at first, a carbolic paste, then the spray with carbolized water and hygroscopic gauze impregnated with the acid; but always mindful of the possible ill results of the absorption of the acid, he protected his wounds from direct contact with the germicide wherever possible. Later on, he or his disciples, used other agents, such as boracic and salicylic acid for the same purposes, and for the spray thymol and other ethereal oils inimical to the germs. It is, therefore, evident that Listerism is not necessarily identical with carbolic acid, nor a departure from the acid a departure from Listerism.

As our knowledge of bacteriology advanced, we found and substituted other agents, more destructive to the germs and less dangerous to the human organism, but in whatever form they were used—in solutions, as the bichloride of mercury, or in powders, as the iodoform—they still, here and there, led to unpleasant results, without, however, impeding the accomplishment of the main object, asepsis. The most faithful followers of Lister have not been blind to these disadvantages, and have steadily tried to assist their master in the perfection of the technique; but some of the changes proposed were too complicated, others too expensive, others not effective enough, and the great desideratum has not been attained until very lately, when it appears that a method has been devised uniting all the safeguards of the Lister system with absolute safety to the patient. It is by substituting the oxide of zinc for all the preparations to be brought in contact with the wound, excepting when a septic condition of the wound necessitates the stronger agents originally employed by Lister.

The introduction of this new method is due to Professor A. Socin, of the University of Basle.

The main idea says Prof. Socin in the preface to his report is that no other antiseptic shall come in contact with the wound. We use, therefore, carbolized solutions only for the disinfection of the operating room before operation, to wash the hands, instruments and the field of operation. The sponges, after being washed clean in water, have to remain four weeks in a five per cent. solution of carbolic acid before being used again, and then washed out and laid into the weak zinc milk (see below). We use the oxide of zinc in four different forms:

(a) A mixture of one part oxide of zinc and one hundred parts distilled water (thin zinc milk) is employed for irrigation of fresh wounds, immersion of sponges which come in contact with the same, and for the purpose of washing out cavities of the body and joints, which have been opened.

(b) A mixture of ten parts zinc with one hundred parts distilled water (thick zinc milk) is used to irrigate all those wounds which are to remain open (wounds of cavities, wounds of operation in mouth, rectum, etc.) before dressing, until the whole surface is covered with a white film.

(c) In form of dry powder it is applied with the sprinkling box in ulcers, burns, scratches, etc., and in these it has had very favorable results.

(d) For the covering of wounds closed by suture we employ the so-called zinc paste, consisting of fifty parts zinc oxide, fifty parts water, and five to six parts chloride of zinc. This paste has the peculiarity of rapidly drying on exposure to the air and forming a solid scab, which is the more adherent and hard the greater the proportion of the chloride in the mixture. In the proportions mentioned above, containing the oxide largely in excess, it forms an air-tight, sufficiently adherent, wound covering, especially when a thin layer of cotton wadding is used as a support to the paste in its application with the brush. When wounds are drained it is self-evident that the opening of the drain must not be covered. Wounds which are not drained, but placed in exact coaptation by suture, do not require any further dressing after the application of the paste.

The zinc oxide is as useless as the other insoluble antiseptics where the wounds are already septic. Here we use, as heretofore, solutions of corrosive sublimate, carbolic acid or chloride of zinc. I consider it self-evident that in antiseptic wound treatment the choice of the particular antiseptic or dressing material is of less consequence than a careful adaptation to each particular case, of the principles of the method. The most important among the few comparatively simple measures needed to carry out the same is that exact coaptation of the tissues be achieved when union per primam is attempted. It is clear that it is not sufficient to sew up the skin, however carefully it may be done, in a wound embracing several layers of structures. I believe, therefore, that any adherent of antiseptic surgery, will, of himself, adopt the deep sutures (*versenkte Nähte*) which have, of late, been recommended as a great novelty.

#### DRY WOUND DRESSING; PAPER-WOOL, A NEW DRESSING MATERIAL.

By GEORGE R. FOWLER, M.D., Surg. to St. Mary's General Hospital, Brooklyn.

From the *N. Y. Med. Jour.*, May 9, 1885:—In the matter of wound dressings, however, there is, apparently, far from being a unanimity of opinion regarding the proper methods to be employed, or even as to the governing principles to be observed. While almost all of the leading surgeons engaged in active practice are more or less impressed with the necessity of observing some sort of antiseptic precautions in their work, yet of these many differ as to the importance of certain points, some insisting that the spray is all-important, and yet allowing, for instance, the cuff of a dirty coat-sleeve to come in contact with the wound made for the purpose of wiring a fractured patella; while others rely upon irrigation alone, and then, after the latter has been most thoroughly done, dry off the wound and surrounding parts with a towel which is not æsthetically, much less surgically, clean. In the matter of dressings, the use of the typical Lister dressing, with its pent-up secretions beneath a layer of impermeable Macintosh, and the sodden condition of the tissues, is almost diametrically opposed the cushions of wood-wool, moss, peat, wood-flour, and sawdust, through which the atmospheric air is allowed to pass freely, and in which the secretions from the wound are designed to dry as rapidly as possible.

In the first efforts made to imitate nature's process of healing under the scab, attempts were made to produce the same effect by hermetically sealing wounds by collodion and cotton, as well as by other adhesive substances.



The method, however, was found to be far from successful, inasmuch as no provision was made for the draining away of the wound secretions, these latter, in their turn, being in a great measure due to the previous entrance into the wound of irritating substances from the surrounding atmosphere.

In the employment of the exsiccation method it is desirable to make use of a dressing through which the atmospheric air can readily pass, and which, at the same time, shall possess absorbent properties sufficient to permit of the removal of the wound secretions from the surface. It should likewise be capable of being impregnated with corrosive-sublimate solution, the latter becoming, in the method of dressing under consideration, the preferable antiseptic agent. It will be at once seen that volatile substances, such as carbolic acid, soon become practically useless unless confined, to some extent, to the wound and its surroundings by an impermeable covering. This latter would defeat the object in view, namely, rapid desiccation of the discharges. In making some experiments with the view of discovering a substitute for the beautiful cushions of soft moss which I had seen used in the surgical clinics in Germany, I was led to make trial of the manilla tissue-paper known as toilet-paper, or water-closet paper. I had a quantity of this cut into strips of about one-sixteenth of an inch in width. This was done for me by a stationer with the common trimming or cutting machines used in that trade. A trial of this substance convinced me that it was incomparably the best material for facilitating the rapid drying of the wound secretions, although not so highly absorbent as some of the others. It was found, however, notwithstanding the fact that wood-flour, wood-wool, etc., were superior in point of absorbent properties, yet the permeability of the paper, when lightly applied, and the rapid drying of the secretions therein, gave it advantages over the other substances. Its absorbent powers are sufficiently good for all practical purposes; it takes up blood and serum readily, and these dry rapidly in its loose meshes.

The method employed in preparing it for use is to soak it in a 1-to-1,000 solution of sublimate. In making this solution, chloride of sodium is added in the proportion of five grains for each grain of the sublimate employed, in order to prevent the decomposition of the latter and the formation of calomel in its stead. After becoming thoroughly saturated in this solution, it is passed through the rubber rollers of a common clothes-wringer and shaken out loosely to dry.

Although not yet prepared to discard the use of some antiseptic in the dressings, yet I am constrained to believe that this latter is of far less importance than a strict attention to every detail of aseptic treatment in the case of the wound itself. Far less danger is to be apprehended from a dressing which is not necessarily antiseptic than from a wound left with an indifferently cleansed and sterilized surface, even though it be covered by layer upon layer of the most elaborately prepared antiseptic materials, and in the most approved Listerian fashion. Therefore, when assured to a reasonable certainty of the aseptic condition of the wound and its surroundings, at the time of closing it and applying the first dressings, I should have no hesitancy in trusting to the paper-wool alone; and this particularly if the atmospheric and other conditions were such as to insure rapid drying of whatever wound secretions passed into the dressings.

## PATHOGENY OF SUPPURATION.

By THOMAS LINN, M.D.

Dr. Linn, in a special correspondence to the *Phila. Med. Times*, May 16, 1885, gives an account of the discussion on this subject in the French Surgical Congress at its recent meeting in Paris:—Dr. Socin, of Basle, Switzerland, read a remarkable article on this subject. He said that all are agreed that suppuration is an accident in wounds, and that it is the first and most important of all complications, for a wound that does not suppurate is out of danger as regards most of the infectious troubles. Several years ago M. Pasteur found in five cases of furuncle and in the pus of an osteomyelitis a

micro-organism forming little spherical points, often seen in small bunches. The method of culture in gelatin or in solidified blood-serum invented by Koch has given a new indication and impulse to our studies of these pyogenic microbes, of which several have been described by different authors. He had made some experiments with his assistant, Dr. Garri. First, as to osteomyelitis, he had found, as Rosenbach and Krause did, both the yellow and white form of the microbe in pus, and he also succeeded in finding them in the blood. In six tubes of blood only one remained sterile; in the five others he found a mixture of both kinds. In a series of thirty trials both were found, the "*Staphylococcus pyogenus albus*," or white, and the "*aureus*," or yellow variety. So he felt that it could not be doubted that they played a very important rôle in the etiology of suppuration.

They afterward found the same parasite in a large number of abscesses, furuncles, phlegmons, whitlows, etc. In seventy-six cases the yellow parasite was found no less than sixty-eight times; in the other eight cases they found the streptococcus. These were very serious cases, and death followed by septicæmia. This fact would seem to bear out the assertion of Rosenbach, who said that the streptococcus belongs to the very malignant forms of disease. They concluded that osteomyelitis had no specific cause proper to itself, but that it had, in common with various acute abscesses, phlegmons, whitlow, etc., the same forms of micro-parasites that produced them. Dr. Garri was not satisfied with theory and the proofs they got by microscopical examination with artificial culture, so he experimented on himself. He first inoculated his left third (ring) finger with a small quantity of the microbes from the blood of a patient having osteomyelitis, and in twenty-four hours he had an abscess that went all around the nail. The re-inoculation of this pus on gelatin gave a culture of the yellow pus-microbe. He then took an entire tube of this microbe obtained directly from pus and inoculated himself again, this time on the arm and by inunction or friction only. In six hours the skin was red, swollen, and painful; the same evening some small pustules appeared, and the next day they were as large as a small pea. In spite of treatment, it went on for seven days with very alarming symptoms, swelling of the ganglions, etc.; taking on, in fact, the character of an immense anthrax. In short, it took three weeks to cure, and left the courageous experimenter with seventeen cicatrices to show how he had suffered in the cause of science.

From these facts they concluded that whitlow, furuncle, phlegmons, etc., are infectious affections due to the presence of pus-microbes; that they are just the same as those of osteomyelitis, and the experiment of their introduction by friction proves that the opening of the skin is not necessary. It is useless to insist on the practical importance of these observations to explain surgical cases that we see daily.

#### THE CORROSIVE SUBLIMATE TREATMENT OF WOUNDS.

From an editorial in the *Medical News*, April 18, 1885:—We have on more than one occasion directed attention to the advantages and risks of corrosive sublimate as a germicide in obstetrical and surgical practice, and have not hesitated to express the opinion that, when judiciously employed, it constitutes the surest, safest, and most manageable of all antiseptic agents. In obstetric practice, especially, its use by injection has been followed by salivation, vomiting, tenesmus, diarrhœa, erythema, and other signs indicating its toxic action in not a few examples, while acute poisoning, ending in death, has been observed by Schroeder, Stadfeldt, Winter, and Vöhtz. In these cases the solutions varied in strength from 1 to 1500 to 1 to 750, and as toxic symptoms and sudden collapse have been observed in similar cases after the injection of solutions of carbolic acid, we may infer that the puerperal genital tract affords a more favorable condition for the quick and dangerous absorption of these agents than any other cavity of the body or any surgical wound.

The bad effects witnessed by obstetricians have not, as a rule, been seen by surgeons after the use of sublimate, and its safety and efficacy are fully

demonstrated by the thirty months' experience of Schede, of Hamburg, whose results are published in *Volkman's Sammlung Klinische Vorträge*, No. 251, 1885. Thus, of 1286 accidents and surgical wounds, 64, or 5 per cent., were fatal, of which only 1 (supra-vaginal hysterectomy) was due to the toxic effects of the remedy.

The results were brought about by the use of a 1 to 1000 solution for the hands of the operator, the skin of the patient, the sponges, and the drainage-tubes, of a 1 to 5000 solution for irrigation of the wound, and an outer dressing of moss wrung out of a 1 to 500 solution and enclosed in gauze wrung out of a 1 to 200 solution of glycerine and water. Although the glycerine doubtless mitigated the action of the sublimate in the gauze applied over the wound, we believe that the strength used was accountable for the not infrequent excoriation and pustules seen at first change of the dressing. In four cases an eruption, precisely similar to that of scarlatina, was met with, which was attended with a severe burning pain, and exhibited a tendency to diffuse itself over the entire body.

In the vast majority of operations, we see no necessity for continuous irrigation with even a weak solution, as a careful washing with a 1 to 1000 solution at the completion of the operation answers every purpose.

### THE RESULTS OF LISTERISM IN AMPUTATION OF THE BREAST.

By C. W. GALLOUP, M.D., of Lynn, Mass.

From the proceedings of the *Essex South District Med. Soc.*:—This consisted in an analysis of the cases of excision of the breast performed at the Massachusetts General Hospital since February 7, 1877, when Dr. H. J. Bigelow first performed the operation, using all the details of Listerism. Of the 111 cases so treated, 80 were of cancer of the breast, and to the consideration of these the paper was particularly addressed.

As the result of the analysis, and a comparison with modes of after treatment usually employed, the following conclusions were drawn:—(1) Antiseptic treatment has reduced the death-rate from 11 per cent. to 8 per cent. (2) It has reduced the amount of erysipelas from 41 per cent. of all cases operated on to 4 per cent. This is a remarkable advance in surgery, and is still more noteworthy when we consider that 7.4 per cent. of the cases under open dressings were fatal, while under Listerism the attacks were uniformly light. (3) Listerism has not affected the death-rate from septicæmia and pyæmia, being 4 per cent. under all dressings. (4) It has practically introduced a new danger, that of carbolic-acid poisoning; 12 per cent. of the cases were thus affected, and two cases may have owed their death to this cause. (5) It has reduced the average stay in the hospital from forty-two to thirty days, thus allowing 40 per cent. more cases to be treated with the same accommodations. (6) It has to a slight extent reduced the severity of the surgical fever.

### ANÆSTHETICS.

From an editorial in the *Canadian Practitioner*:—There has not been anything like a consensus of opinion in the past in deciding which is the best of the anesthetics now available; but the results of experience have enabled us to do away with much of the vagueness that has existed, and formulate somewhat fixed and definite rules.

We will summarize by giving certain rules, as follows: (1) In ordinary operations give ether, or a combination of two parts of ether and one of chloroform. (2) Give chloroform where there is disease of the kidneys or a tendency to bronchitis. (3) Give chloroform to young children. (4) Give chloroform in ordinary cases of labor when required. (5) In cases of labor where the patient has become much exhausted, and is in great fear, give ether in performing necessary obstetric operations. (6) Never give chloroform to a patient in a dentist's chair, or not in the recumbent position. (7) Do not keep a patient under an anesthetic one minute longer than is absolutely necessary. (8) Let the administrator of an anesthetic attend carefully

to his own work, and nothing else. [Some surgeons regard the [mixture of chloroform and ether as even more dangerous than chloroform used alone.—Ed.]

### ATROPIA AS A REMEDY IN ETHER-NARCOSIS.

By E. W. AMIDON, M.D., New York.

From the *Medical Record*, May 2, 1885:—The question has often presented itself to my mind, "Are the methods of meeting the alarming effects of anæsthetics sufficiently defined and sure to reflect credit on our science?" In my opinion they are not.

While among published cases, ether very rarely kills, still every practitioner will, sooner or later, see alarming symptoms occur during its administration.

I think nearly all practitioners will agree with me when I state it as my conviction that sudden death from ether generally occurs in the third stage of anæsthetization, that of ether-narcosis—and also that the cause of death is a combination of asphyxia and syncope; the failure of respiration being more prominent and *primary*, the failure of the heart being less prominent and secondary.

In conclusion Dr. Amidon submit his suggestions as to the proper treatment of ether-narcosis as deduced from his experience and experiments. To avoid as much as possible the depressing effects of anæsthetics, present in varying degrees in all cases, be careful to have the patient, particularly his extremities, warmly protected and, if necessary, warmed by hot bottles.

If alarming symptoms occur, the condition is generally one of depression, and hence stimulating, not depressing, remedies are indicated. For this reason the cold douching and slapping with cold wet towels should be avoided. Hot applications are just as exciting and devoid of danger.

If during the later stages of anæsthetization the respiration becomes embarrassed, the pulse begins to fail, and other alarming symptoms occur, take off the ether, draw the tongue and jaw forward and, if the respiration do not improve *at once*, give hypodermatically .002 of the sulphate of atropia and apply heat to the limbs and over the heart. If improvement does not occur in two minutes repeat the dose.

If the respiration suddenly or gradually ceases, and neither lifting the jaw forward nor any other simple procedure starts it again, commence *mechanical* artificial respiration *at once*, the method of Sylvester being probably the best; admit fresh air freely. Have .003 of the sulphate of atropia given hypodermatically at once. Order hot applications to the extremities and precordial region. If a faradic battery be handy and in order, one electrode might be placed on the cervical spine and a strong current be applied diffusely over the chest with a wire brush. Even if the pulse disappears attempts at resuscitation should not be abandoned, the artificial respiration being the most important. The dose of atropia may be repeated if signs of recovery do not begin to manifest themselves in a minute.

I am of the opinion that free venesection would be of great service in some cases where the subject be plethoric and no large hemorrhage has taken place. My reasons for so thinking depend first on the fact that, on post-mortem examination of men and animals dying of ether-narcosis, venous engorgement and distention of the right heart is found; and secondly on the fact that I have repeatedly seen the heart in animals apparently dead of ether-narcosis, commence to beat again after a free incision in the liver (from which the venous blood will actually spirt) or a section of some large venous trunk or an incision into the distended right heart itself.

### ON THE SURGICAL DISSEMINATION OF CANCER.

By A. G. GEXSTER, M.D., Surg. to the German and Mt. Sinai Hospitals.

From a paper read before the N. Y. Surg. Soc.:—The subject in question is not mentioned by the authors of text-books on general and special surgery, and is unknown in periodical literature. The present essay is an a

*priori* consideration of the possibility or probability occurring in the course of the development and treatment of cancer.

The subject-matter itself is not strictly new, observations bearing upon it having been made and published from time to time in an unconnected manner. The leading idea was originated in the year 1877, by observing the course of a striking case of rapid dissemination of cancer. Since then a number of other cases have accumulated, tending to confirm those first impressions.

Dr. Gerster gives the history of his first case and then says: We must have had originally a true granuloma, which at the time of the first operation was undergoing the not unusual change into cancer; some portions of the tumor then removed still presenting the character of a connective-tissue growth. But is the fact of this change of a benign into a malignant neoplasm alone sufficient to explain its astonishing swift dissemination? [All the organs were cancerous within, 10 mostly from the first operation as shown by the autopsy.] Certainly not, as all processes of dissemination observed in malignant new growths, local and systemic, are notoriously slow, and not to be compared with that in the foregoing case. By "slow" is understood a nidus which is not continuous, but interrupted; is characterized by well-defined phases of activity and seeming rest.

In the case related, local and general dissemination seems to have taken place simultaneously. The assumption of a mechanical, rapid distribution of the infective bodies is almost imperative, and this rapid mechanical distribution of the infective elements may have been accomplished by the manipulations incumbent upon the performance of the operation.

A careful physical examination of a tumor, especially if made by the aid of anæsthesia, will be, and notoriously is, frequently accompanied by the use of a good deal of necessary or unnecessary force. The handlings or manipulations ordinarily in use during the performance of bloody operations on tumors, to be dissected out of surrounding tissues, have positively the character of massage, and occasionally a very rough form of massage, too. And the employment of anæsthetics has certainly not had the effect of increasing the gentleness of operative interference. Suffice it to say that the manipulation employed on a tumor of the breast and the lymphatic glands occupying the adjacent axillary cavity during an operation lasting one or two hours, certainly may have the dignity of a manipulative séance. And all of you know that a skilful massage of thirty minutes will often cause to disappear a massive extravasation of blood from the vicinity of a sprained joint, and that three or four sittings may dispel the largest part of a solid infiltration of an inflammatory character from this or that part of the body. Now just bear in mind how many formed corpuscular elements, be they cells or broken-up portions of a firm clot, must be propelled through the lymphatics and veins into the general circulation at each massage, and the idea of the probability of the propulsion of cancerous elements of an unfixed, minute, that is, embryonic character, and situated especially in recently involved places about the margins of a tumor, is very plausible indeed. The analogy of these artificial processes is *a priori* evident, and the fact that mechanical irritation, that is, another form of massage, favors the spread of malignant disease, stands fully in accord with this assumption. Finally, it seems appropriate to adduce here Billroth's authority as a pathologist in these, his words: "I consider it most highly probable that both the continuous and the discontinuous spread of carcinomata is effected (*vermittelt*) by the dissemination of corpuscular elements, but admit that so far we are unable to prove this in all cases."

The author does not wish to have it understood that he considers this mode of dissemination the rule, but he believes that in a number of cases of malignant disease operative treatment may hasten, rather than retard, death.

#### CIGAR SMOKING AND CANCER.

Ap[ro]pos of the reports (very commonly believed in this country among the public) that General Grant's condition is due to cigar smoking, we quote the following *sensible* remarks from the *Brit. Med. Jour.*, March 14, 1885:—

"Whilst all who read the newspapers in any country must have learned, with regret, that the gallant general who saved his country from disunion, and guided its destinies for so many years, is suffering from a painful and deadly malady, it is very advisable that capital should not be made by a certain party out of the alleged cause of his illness. It has been distinctly reported in several journals that General Grant is suffering from cancer of the tongue caused by smoking. A little knowledge of pathology is sufficient to demonstrate that smoking cannot cause cancer, although the irritation of a pipe sometimes sets up ulceration of the lip, which, when of very long standing, may become cancerous, provided that the patient has a hereditary tendency to cancer. There is no evidence whatever that cigar-smoking causes cancer of the tongue. Mr. Butlin, the author of some of the most recent observations and statistics on cancer of the tongue, has shown that the proportion of men to women suffering from that disease is nearly six to one, but that it occurs in men who neither drink nor smoke, whilst it is as rare among women of the most masculine habits as amongst other females. Even the irritation of a broken or decaying tooth can only be an occasional exciting cause, since this condition is as common amongst women as amongst men, whilst cancer of the tongue is, fortunately, rare, out of all proportion to cases of decayed teeth. There can be no doubt that a man with a tooth irritating his tongue ought to have it removed. It is equally certain that no smoker who has a sore on his tongue ought to persist in the use of tobacco until that sore is cured. But the risk of cancer through smoking is so infinitesimal, as to be perfectly useless as an argument for the anti-tobacconists."—*Med. and Surg. Reporter*, April 11, 1885.

#### CANCER IN SYPHILITIC SUBJECTS.

From the *Western Med. Review*, May 2, 1885:—We believe that the incidental relationship between cancer and syphilis in the same individual is a subject on which little of value is known.

This question has been taken up by M. Ozenne, *Journal de Médecine et de Chirurgie*, who deals with it exhaustively in a recent volume, referring especially to syphilitic cancer of the mouth. This latter is a hybrid disorder arising from the united action of syphilis and cancer. The former disease, when thus associated, is always tertiary, its prior stages having never been observed in direct connection with cancer. The combined lesions of cancer and syphilis, when affecting the buccal cavity, are of several kinds, among which the author distinguishes three in particular—the cancero-sclerous, the cancero-gummatous, and the cancero-sclero-gummatous varieties.

(1.) In the cancero-sclerous form, the cancer under its usual aspect is sometimes the first to be manifested; sometimes, though more rarely, it is preceded by the syphilitic lesion; and, after a certain interval, we are confronted by a sort of mongrel condition, compounded of the products of incipient cancer, and the changes due to sclerous glossitis. The appearance of the tongue is then as follows: The organ is enlarged, and displays the cancerous formation. If this be superficial, as a hard swelling, irregularly shaped, of variable size, and more or less prominent; if the epithelioma be interstitial, the tumor is sub-mucous, resistant, elastic, and seated upon an indurated base of undefined dimensions. In the neighborhood of the cancer are observed either the lesions of the superficial sclerous glossitis—smooth, shining, slightly-reddened indurations, circumscribed, or co-extensive with the mucous membrane—or, more frequently, all the evidence of a dermo-parenchymatous glossitis, whose hardness is diffuse and downward-reaching, so as to impart a peculiar sensation to the examining finger.

(2.) In the second form—the cancero-gummatous—the lesions are so closely united that the features peculiar to each of them are almost entirely effaced; we have an excavated ulcer with an indurated base like that of a cancer, but without the perpendicular walls or bleeding surface characteristic of the latter. Sometimes, also, other ulcers are found in the vicinity.

(3.) The third or cancero-sclero-gummatous variety is the most complex; it combines the gumma, the cancer, and the dermo-parenchymatous sclerosis

in very various proportions, sometimes manifesting one of these components quite distinctly, and sometimes blending them in utter confusion—thus presenting an exceedingly diversified appearance.

Such are the distinguishing marks of syphilitic cancer of the mouth—marks which are reproduced when the lesion is situated on the tonsil, the cheek, or the lips. As to its functional symptoms these consist almost wholly in a diminution of the disturbances caused by either of the diatheses when alone present. Thus, hemorrhage is seldom met with, and pain, so frequent an accompaniment of uncomplicated cancer is generally absent. Despite these advantages, the termination is no less fatal.

## THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE HUMAN BRAIN.

By JOHN B. ROBERTS, M.D., Philadelphia.

The author's views were set forth under the following heads in a paper read before the *Amer. Surg. Ass'n*, April, 1885:—

I. The complexus of symptoms called "compression of the brain" is not due so much to displacing pressure exerted on the brain-substance as it is to some form or degree of intracranial inflammation.

II. The conversion of a closed (simple) fracture of the cranium into an open (compound) fracture by incision of the scalp is, with the improved methods of treating wounds, attended with very little increased risk to life.

III. The removal of portions of the cranium by the trephine or other cutting instruments is, if properly done, attended with but little more risk to life than amputation of a finger through the metacarpal bone.

IV. In the majority of cranial fractures the inner table is more extensively shattered and splintered than the outer table.

V. Perforation of the cranium is to be adopted as an exploratory measure almost as often as it is demanded for therapeutic reasons.

VI. Drainage is more essential in wounds of the brain than in wounds of other structures.

VII. Many regions of the cerebral hemispheres of man may be incised and excised with comparative impunity.

VIII. Accidental or operative injuries to the cerebral membranes, meningeal arteries, or venous sinuses should be treated as are similar lesions of similar structures in other localities.

IX. The results of the study of cerebral localization are more necessary to the conscientious surgeon than to the neurologist.

The principles of treatment were, for the sake of exciting discussion, dogmatically formulated as follows:

The principles of the operative surgery of the brain are applied to the treatment of

### A. Cranial Fractures.

(a) In closed (simple) fissured fractures. (1) No evident depression, no brain-symptoms. No operation. (2) No evident depression, with brain-symptoms. Incise scalp and trephine. (3) With evident depression, no brain-symptoms. Incise scalp and possibly trephine. (4) With evident depression, with brain-symptoms. Incise scalp and trephine.

(b) In closed (simple) comminuted fractures. (5) No evident depression, no brain-symptoms. Incise scalp and probably trephine. (6) No evident depression, with brain-symptoms. Incise scalp and trephine. (7) With evident depression, no brain-symptoms. Incise scalp and trephine. (8) With evident depression, with brain-symptoms. Incise scalp and trephine.

(c) In open (compound) fissured fractures. (9) No evident depression, no brain-symptoms. No operation, but treat wound. (10) No evident depression, with brain-symptoms. Trephine. (11) With evident depression, no brain-symptoms. Possibly trephine. (12) With evident depression, with brain-symptoms. Trephine.

(d) In open (compound) comminuted fractures. (13) No evident depression, no brain-symptoms. Probably trephine. (14) No evident depression,

with brain-symptoms. Trephine. (15) With evident depression, no brain-symptoms. Trephine. (16) With evident depression, with brain-symptoms. Trephine.

(e) In punctured and gunshot wounds. (17) In all cases and under all circumstances. Trephine.

B. Intracranial Hemorrhage. Trephine for the removal of clot and arrest of bleeding when the probable seat of hemorrhage is ascertainable, and the clot is believed to be a localized one.

C. Intracranial Suppuration. Trephine and make, if necessary, exploratory punctures in all cases of abscess.

D. Epilepsy following Cranial Injury. Remove portion of cranium in selected cases.

E. Insanity following Cranial Injury. Remove portion of cranium in selected cases.

F. Cerebral Tumor. If can localize it, and if it is probably superficial, remove bone; and excise growth if it is found.

#### BURSAL SWELLING AT THE BACK OF THE WRIST.

From the proceedings of the *N. Y. Surg. Soc.*, Feb. 24, 1885:—Dr. A. C. Post narrated the case of a boy nine years of age, with a swelling of this sort, and in which he made an effort to rupture the sac by striking it sharply with a wooden bat. The first blow did not rupture the swelling and he repeated it several times, and found that a dangerous degree of force would be required to rupture it in that way. He then punctured the cyst, and pressed out exceedingly viscid contents. After squeezing out the contents through a small opening, he applied an antiseptic lotion, and afterward a compress made of cork which he bound over the swelling with a bandage. This was allowed to remain for a week, when the patient returned, and, on removing the dressing, he found that the cork had made a marked depression of the surface where it had been applied, but that there had not been the slightest inflammation, and the case was progressing favorably.

*Note.*—The patient was seen again after the lapse of another week, and there was nothing to indicate a return of the swelling.

Dr. Sands inquired how frequently the members of the society had performed cutting operations for the cure of this disease, for it seemed to be a question of considerable interest at the present time. The treatment by rupture, as described by Dr. Post, had doubtless often yielded good results, but not infrequently the relief afforded proved to be temporary. Another method of evacuating the cyst was to open it subcutaneously with a broad needle. His own experience with this method had been generally favorable, yet he had known it to fail to accomplish a permanent cure. His knowledge of extirpation of such ganglia was limited to two cases. The first one he himself treated by excision a good many years ago, and was able to dissect out the cyst without opening the sheath of the tendon. The patient made a good recovery.

The other case occurred in the practice of a medical friend before the days of antiseptics. Excision was performed, the parts being rendered insensible by ether spray. Violent inflammation followed the operation and rendered the hand nearly useless.

The President referred to the operation of incision and packing with iodoform which had struck him as one worthy of trial.

Dr. Stimson said that he had recently made subcutaneous puncture by means of a flat needle in two cases, both of which did well.

Dr. Sands thought that the subcutaneous puncture was always safe.

Dr. Post remarked that he attempted subcutaneous puncture in his case, but the cyst was so thick that the fluid was oozing out before it was complete.

#### SURGERY OF THE SPINAL CORD.

By J. CAMPBELL, M.D., L.R.C.P. Ed., Seaforth, Ont.

From the *Canada Lancet*, May, 1885:—The very interesting and important subject of what now generally goes by the name of "Railway Spine," has,



during the last year, been attracting renewed interest. This has been owing in a great measure to the publication of Page's work "On the Injuries of the Spine and Spinal Cord." Mr. Page has been for a number of years surgeon to one of the greatest railway corporations in England, and, therefore, had a very extended experience of all possible railway injuries, and particularly of cases of so-called "Railway Spine." He contends that cases of what are commonly called "concussion of the spine," do not exist, except in the imagination of the surgeon making the diagnosis. By concussion he means the cord receiving an injury of such a nature as to give rise to pronounced symptoms, without, at the same time, the vertebræ, ligaments or membranes receiving any hurt.

It is well-known that Mr. Erichsen has been a strenuous advocate of the theory that the great majority of cases of railway injuries having for their symptoms, spinal symptoms, are due to concussion of the spinal cord. The first one hundred pages of Mr. Page's book are taken up with combating this view of Erichsen, and he, at least, conclusively shows that the vast majority of cases of concussion of the spine are nothing more nor less than cases where the lumbar muscles or ligaments of the spine have been sprained or ruptured.

Erb presents the matter more fairly than either of these writers. Accidents which occur in railway collisions, as other accidents, may lead to a long train of nervous symptoms, and when death has resulted, a post mortem examination may show little apparent cause for the fatal result. In the greater number of these cases the pathology is a riddle, which, for its satisfactory solution, will need a great deal of experiment and careful and extensive post mortem investigation. The great trouble in coming to an opinion as to the nature and cause of a train of nervous symptoms following a railway injury is not whether we have to do with a functional or organic change, but whether we have to do with an actual or feigned train of symptoms. Usually the patient's symptoms are of such a nature that the physician can come to a conclusion without much trouble, but where he has to do with an intelligent and unscrupulous man who expects a large sum from a railway company, the case is one of extreme difficulty. In many of these cases it is quite impossible to come to a certain diagnosis.

In the words of a recent writer, the "needed clinical work, it seems to us, in the study of 'railway spine' is the determination of clearly defined types of the disease, and the investigations of the variations from this type, and the certain relation of objective symptoms to the disease." That serious and even fatal effects may arise from changes in the cord where it has not received any direct injury has been abundantly proved. In the current number of one of our periodicals there is a very instructive case reported by Dr. Edmunds, of a soldier who was struck in the back with a bullet. He fell immediately, and had to be carried out of action. The bullet entered the back two or three inches from the spine, and the surgeon who first attended him considered that the spine was severely injured, because the patient had lost complete control over both lower extremities. Patient had paralysis of the bladder and rectum also. There was cystitis and a bed sore over the sacrum before death, which occurred five months after the injury. At the autopsy there was no fracture or indication of fracture, or dislocation of the vertebræ to be found. The cord was seen to be much atrophied and softened about the level of the wound. On hardening the cord in Müller's fluid, it was seen that there was universal myelitis and softening for about two inches opposite the wound, this gradually passing below into sclerosis of the lateral and anterior pyramidal tracts, and above into sclerosis of the posterior columns. There was no indication of hemorrhage, either external or into the substance of the cord. Its surface was uninjured. This was undoubtedly a case of pure "spinal concussion."

#### THE SEVERAL FRACTURES AND INJURIES OF THE NECK OF THE FEMUR AND THEIR TREATMENT.

By HAL C. WYMAN, M.D., Prof. of Phys., Michigan Coll. of Med., Detroit.

From the *Medical Record*, May 9, 1885:—In no class of injuries are the futile and harmful effects of rude and reckless examinations more manifest

than the cases of injury to the neck of the femur and hip-joint of old persons. The old lady slips and falls on the frozen ground or floor, she tries to get up and fails; a doctor is called; he finds her stunned and suffering pain in the back, hip, or thigh. The foot is in normal position, the length of limb what it should be in health. Friends inquire, is the hip broken? is it out of joint? He cannot say; when he gets the patient home he will examine and see. Then he manipulates the limb, flexes thigh on abdomen, rotates the limb outward and inward, and may or may not get crepitus. If he does, she has a fracture. If he does not, she has intracapsular fracture.

The point I desire to submit is this: What good can come to the patient from the determination of a distinction of that kind? Surely none at all. You may say that it makes a great difference in the treatment. So far as treatment, based on that distinction, is concerned, diagnosis is immaterial. You do best with these cases of suspected fracture when you use no restraining apparatus. Is it strange that the old lady before mentioned should turn out to have an ununited fracture or absorption of the head of the femur after the manipulations her injury was subjected to, then with weeks of confinement in apparatus to restrain the movements of the joint, to have the bed-sores, and broken general health? No harm can come to the patient from an examination which consists in a careful interpretation of the impaired mobility and abnormal position of the limb, the length, flexion, extension, abduction, adduction, inversion, eversion, relatively of the injured member to its sound fellow. But beyond this the respecter of good surgery will not go. Take almost any case of ununited fracture of the femoral neck and inquiry will show that the patient submitted to a deal of manipulation for purposes of diagnosis and adjustment of apparatus at or about the time the injury was received. Any case of injury to the same part which has resulted in good union and useful limb, was treated on the let-alone principle, *i. e.*, making the patient as comfortable as possible with the limb in the position where the automatic action of the muscles of thigh and hip places it. My own experience embraces not a few of these injuries, and I can say that I have found cases of suspected and known fracture of the femoral neck to do best when the patient was kept in the sitting posture, the tuberosities of the ischia resting on a hard seat, the feet side by side, and the legs bound loosely together. A hard seat is essential, for a soft cushion permits the tuberosities to sink so that the weight of the trunk and upper extremities, is carried on the soft parts of the gluteal region, comprising the sciatic nerves and giving rise to severe pain. Non-union is not a common result of fracture of the surgical or anatomical neck of the femur, no matter what age the patient may be, when this plan of treatment is followed.

### SECONDARY NERVE SUTURE.

By THOMAS M. MARKOR, M.D., of New York.

From the proceedings of the *N. Y. Surg. Soc.*:—It has long been known that divided nerves would, under favorable conditions, unite with restoration more or less complete, of the functions which had been abrogated by the injury. Indeed, this fact has played a prominent part in the results of the operations which have been performed on nerves the seats of neuralgia, where it has been sought to cure the pain by abolishing the sensibility of the affected nerve by separating it by section from its trophic centre. These operations, as is well known, though giving temporary relief, have commonly failed to be of permanent benefit, because the divided nerves, after a certain lapse of time, have reunited, with reestablishment of function, which has announced itself by a return of the pain in all its original severity. To avoid this disappointing result, operators have been at much pains to prevent, if possible, the reunion of the divided trunk, and various devices have been resorted to for this purpose. Sometimes considerable portions of the nerve have been removed, sometimes a loop of the excised nerve has been doubled back at each cut extremity, and some have fastened back these loops by sutures or ligatures. Some have modified this procedure where the trunk was easily accessible by burying the looped ends deeply in the surrounding

tissues, and sometimes foreign bodies have been interposed between the divided ends to keep them separate until the disposition to unite should disappear. In spite of all these precautions, it has not been possible, in certain cases, to prevent a recurrence of the neuralgic disorder; a recurrence which, it is generally believed, and in some instances has been proved to be associated with a union, and sometimes with an extensive regeneration of the injured nerve. Examination of nerve-trunks which have undergone this regeneration, have shown the nerve-tubules perfectly restored in their continuity, and but little changed from their normal condition.

Such facts as these led very naturally to the hope that nerves accidentally divided, and where restoration of function has not occurred, might be restored to their normal powers of transmitting sensory and motor impressions by exposing the injured trunk and bringing together by suture the divided ends. This operation is not by any means a new one. It was done by Arnemann in 1826, and by Flourens in 1828, and it is stated that it was practised by Dupuytren in several instances at l'Hôtel Dieu. It was not, however, until after the elaborate researches of Augustus Waller, which were published in the *Comptes Rendus* of the Academy of Sciences of Paris, in the year 1852, that the operation was placed on a scientific basis.

I have had the opportunity of performing the operation in two cases. One was a stab wound of the arm, and the other an incised wound of the neck.

Dr. Markoe had collected 89 cases, including Weissenstein's 88, and of these, twenty-nine were successes, in so far that sensibility and motility were at least partly recovered. In six cases no improvement, or almost none occurred, and in three cases the data were insufficient for statistical use. The dates of improvement can be given approximately thus: Traces of sensibility were noted in from two to four weeks. Traces of motility in from sixteen days to sixty, in two cases more than a year. Complete restoration of muscle function was marked in one case as occurring in twenty-six days; in several cases not till the lapse of one or even more years. All the authors seem to agree that electricity and massage greatly favored the return of function in the paralyzed parts. If now we consider that three-quarters of all the reported cases were more or less successful, and still further consider that many of the cases were reported so soon after operation that the full results had not yet been realized; I think we are warranted in concluding that the proceeding promises a degree of success which we can count upon in very few of the operations which we are every day performing. When we take into account the serious and permanent disability for the cure of which the operation is recommended, the entire freedom from danger to life, and the large measure of success which has followed its performance, we are entitled, I think, to regard it as one of the best and most useful contributions to modern surgery.

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#### FRACTURE OF THE PATELLA.

From the proceedings of the *N. Y. Surg. Soc.*, March 24, 1885.—Dr. H. B. Sands was called in consultation three days ago to see a lady who had received, ten days previously, an injury while getting off a railroad car in the Grand Central Depot. She stepped from the car to the platform, which she says, was an unusual distance, and alighted upon the right foot. She was aware that she had received some injury by feeling a sharp pain which almost caused fainting, and by hearing and feeling something snap. She did not fall, and was certain that she did not strike her knee. She was able to walk a considerable distance—nearly the length of the depot—where she was met by a relative who escorted her to her carriage, in which she was driven home. She was able to ascend the steps without much assistance, and was helped upstairs to her bedroom in a similar way. On the following day, she sent for her physician, who found a great deal of swelling in the lower part of the thigh, from the extravasation of blood, and also a considerable effusion into the knee-joint. Ten days afterward the effusion into the knee-joint had subsided, the ecchymosis had disappeared, and a fracture of

the patella was discovered. Dr. Sands saw the patient, and found that the fragments were separated to the extent of half an inch. A singular feature of the case was that the fracture, which ran through the middle of the bone, was not transverse, but diagonal, running from above downward and inward.

This was the only case in Dr. Sand's experience in which he had ever known a person to fracture the patella completely and to be able to walk immediately afterward.

#### DOUBLE COLLES' FRACTURE.

Dr. JNO. H. MCINTYRE, of St. Louis, Mo., in the *St. Louis Med. and Surg. Reporter*, March, 1885, reports a case of double Colles' fracture occurring in the person of Oscar C. Moon, 19 years of age, who in 1876 fell from the eaves of a two story building to the ground. He says: "In looking over 'Hamilton on Fractures and Dislocations,' Sixth Amer. Edition, page 298, I find that of the one hundred and twenty-seven cases of fracture of the radius which he reports that one hundred and five are Colles' fracture; he gives precise information of the number occurring in males and females, of those occurring in the right and left arm; but to my surprise he does not mention a single case of Colles' fracture occurring in both arms occasioned by the same accident.

#### THE USE OF WIRE OR NAILS IN EXCISION OF THE KNEE-JOINT.

From the proceedings of the *N. Y. Surg. Soc.*,—Dr. CHARLES MCBURNEY, presented a patient upon whom he had performed excision of the knee-joint, and said that the bone was treated without either wire or nails, or other apparatus, except an external apparatus to obtain apposition of the fragments, a method which Dr. McBurney thought possessed advantages.

Dr. Post remarked that the evil resulting from the introduction of wires was not very formidable.

Dr. McBurney said that the results were not very serious, but at the same time he had seen prolonged discomfort, considerable pain, and suppuration resulting from the presence of such foreign bodies, and unless the advantage attending the presence of the wire or nails was very compensating, he thought they had better not be used. In a case like the one just reported, which was the worst he had ever seen, he thought the result was in favor of not using wire to hold the surfaces in apposition.

Dr. Gerster thought the question could not be decided so simply as this. He believed that there were cases in which the use of wires and nails were not necessary, whereas they might be in some cases essential to get good apposition of the fragments. He had not wired many bones, but he had used nails in six or seven cases, two of exsection of the knee-joint, two in the performance of Mikulicz's operation, and after a number of necrotomies—and had found them exceedingly useful and non-irritating.

The President remarked that the nails certainly added firmness to the limb, and were easily removed.

Dr. McBurney agreed with Dr. Gerster with regard to the use of nails and wires, but he thought there were few cases in which exsection of the knee or shoulder was demanded in the fat subject. The point was not whether nails could be borne without causing irritation, but whether nails were necessary. That they could be borne, there was no question whatever; but, on the other hand, there were cases not infrequently, in which the bone was so disorganized, and abscess cavities were so large, that practically there was not sufficient bone left in which the nail could enter and be of any service.

Dr. L. A. Stimson said that there was another question of importance in the treatment of these cases, laying aside the question of how much benefit either wire or nails afforded. It was well known that the bone encountered in excision was not tough, strong tissue, but was spongy, could be readily broken down with the gimlet, and that whatever instrument was used for making the holes for inserting the wires or nails usually made a hole much larger than itself.

He thought that the result desired which could not be obtained with wire could be obtained by attention to one point in the dressing, that is, to support the limb with the heel considerably higher than the buttock in the splint which does not take hold of the limb below the knee, and thus allow the thigh to sink away from it. If this method is observed, simply lifting the limb and placing it upon a posterior splint, gravity keeps the leg in apposition with the thigh, and all that the wires can do in addition is to keep the segments from being rotated one upon the other.

Dr. H. B. Sand's experience in the use of nails in excision of the knee was limited to two cases. His own inclination would be to use nails in preference to wire, and if they could be shown to be harmless, as it seemed to have been demonstrated, they should be tried as a means of getting better apposition than could be obtained by the use of external splints; they would also appear to be particularly useful in a case in which frequent dressings were required.

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## RESPIRATORY ORGANS.

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### EMPHYEMA—PARACENTESIS AND DRAINAGE.

By E. FLETCHER INGALLS, M.D., Prof. of Laryngology Rush Medical College, Chicago.

From the proceedings of the *Chicago Med. Soc.*, March 16, 1885:—The methods of operating which have, from time to time, been recommended, have probably originated in circumstances peculiar to some individual case, and each may possess advantages, though not universally applicable. However, between the simple but usually inefficacious operation with the aspirator needle and the excision of one or more ribs, there are methods which afford great advantages in a large percentage of cases, and it seems to me that the best of these is one which I have followed for several years.

Aspiration alone will cure a limited number of cases; a free incision is likely to cure a large percentage of those who survive the shock incident to the operation. (See Transactions of Illinois State Medical Society for 1877.) and the sudden evacuation of pus with its consequent disturbance of the circulation; but there is no doubt in my mind that, for the large ratio of fatal cases, where the radical operation has been made, the operation itself, in some of its forms, is responsible.

A good result, I believe, will more frequently follow an operation that will enable us to empty the cavity slowly and at will, and, at the same time, keep it thoroughly disinfected. Aspiration will not meet these requirements, excepting in a very few cases, therefore a radical operation for free drainage must be made. Having decided on this, I believe it always best to precede the radical operation by aspiration, withdrawing the pus, several times, if necessary, in order that dilatation of the lung and contracture of the chest walls may proceed to such an extent that all the fluid may be removed at one time, without causing a distressing sense of compression of the chest and suffocation. When this has been accomplished a few days should be allowed for the cavity to partially refill, then the operation for permanent drainage should be made.

In order to secure proper drainage and prevent the loss of tubes in the pleural cavity I prepare my drainage tubes as follows: I select a piece of the best rubber tubing, two feet long, nearly a quarter of an inch in diameter, with a calibre of an eighth of an inch. This is cut half through near the middle, so that, when folded at the cut, one end will project an inch beyond the other. When folded the two pieces are fastened together, at a point about one and one-half inches from the cut, with a silk suture, which is tied on the inside of the perforated tube. This suture keeps the tubes in the same relation to each other, and prevents one of the annoyances incident to the use of drainage tubes that are not so fastened. One portion of the tube should be perforated about half an inch from the cut, and the other portion in several places extending from near the

cut three or four inches along that portion which is to hang within the chest. As a matter of convenience the outer ends of the tubes are tied tightly so that pus will not escape through them while they are being introduced. The length of the tubes should be recorded so that we may know subsequently just how far they extend into the cavity. The difference in the length of the two enables us to know in which one there are several perforations, a matter that is often of importance in the subsequent treatment.

Immediately before the operation the aspirator needle or a hypodermic syringe may be tried once more, to avoid making an opening when adhesions have bound the pleural surface together, and insure an entrance into the cavity.

My mode of operating is to make an incision through the skin about one-fourth of an inch long, through which I plunge a broad, flat trocar into the pleural cavity. This trocar is broad enough to allow the easy passage of two drainage tubes. As the stilet is withdrawn the pus follows in a full stream through the canula, but it is instantly stopped with the thumb, until the drainage tubes are picked up. The thumb is then removed, the tubes pushed rapidly into the cavity to the required depth, the canula is then withdrawn and the tubes left in position. Thus not more than an ounce or two of pus will escape, and the tissues will contract closely about the tubes, preventing the entrance of air.

A piece of sheet rubber about three inches square, with two small openings near its centre, is then slipped over the tubes down to the chest wall, where it will act as a valve to prevent the ingress of air, should the tubes become loose.

In order to secure the tubes perfectly I then slip over each, with the aid of a canula, a section half an inch long, of the same tubing, through which have been tied two loops of strong cords. These are carried down close to the chest wall and slipped off on the tubes, which they fit so closely that slipping is impossible. Long strips of adhesive plaster are then passed through the loops and around the chest, and thus the tubes are perfectly under our control. Over the whole is placed a bandage, between the folds of which hang the drainage tubes, and the dressing is complete.

After completing the dressing I open the tubes, attach longer pieces by means of bits of glass tubing, and wash out the pleural sac with a 20 per cent. solution of carbolic acid at 101° F., first through one tube and then through the other, until the cavity is clean, being careful to exclude air. After the washing the ends of the tubes are folded upon themselves, and tied so that they are hermetically sealed. Subsequent cleansings should be made two or three times a day, and very soon this may be done by the friends or by the patient.

In the majority of cases I think it possesses the following advantages over other methods. (1) It may be quickly and easily performed without an anesthetic. (2) It enables us to partially or completely empty the chest being governed by the effect upon the patient. (3) It is free from one great risk incident to free incision into the chest, viz.: As a result of the sudden evacuation of pus, and the free entrance of air, many patients die from the operation within a few hours. (4) Air may be excluded from the cavity for several days, if care is used, or at most but a few bubbles can enter, if the tubes are opened only under water.

[While the entrance of air at this time is thought by many to do no harm, I am firmly impressed with the view that if any considerable amount enters during the first few days, the patient's chances of recovery are greatly diminished.] (5) The drainage tubes are held securely, and cannot slip into the chest. (6) The opening is so closed as to almost wholly prevent the escape of pus, except through the tubes, thus enhancing the comfort of the patient. (7) As a nurse may readily cleanse the pleural cavity, the subsequent treatment is rendered much simpler and easier than where a free opening has been made. (8) In the chronic cases, where resection of a rib or of portions of several ribs may be necessary, this is the best possible preparation of the patient for their operation. (9) 80 per cent. of the patients operated on will recover.

## EMPHYEMA IN CHILDREN.

By A. B. ATHERTON, M.D., L.R.C.P. and S. Edin., Toronto.

From the *Canadian Practitioner*, May, 1885:—It will be seen from the above reports (two cases) that there was no increase in the measurement of affected side of chest over the opposite one in either case. And such I believe, is the general rule in long standing effusions in children.

As to the non-use of injections to wash out the pleural cavity, I may say that, with the exception of my first case of operation eleven years ago, I have not employed them at all. I found that in that patient so much fatigue and worry were caused by their use that I was obliged to give them up, and from subsequent experience in six other cases, I believe that they are seldom advisable or requisite. Out of my seven operations only one patient died, and her case was one of empyema, following immediately upon a pelvic abscess, and where after considerable improvement in her general condition, death was brought about by a severe diarrhœa due to eating freely of green vegetables. It is considered by some especially necessary to wash out the chest with antiseptic fluids in all cases where the pus is fœtid. But I may mention the fact that in one of my cases in which there was the most horrible fœtor, the latter had entirely disappeared after a few days dressing with carbolized oil.

## EMPHYEMA.

By J. T. CROFFORD, M.D., Memphis, Tenn.

From the *Miss. Valley Med. Monthly*, April 10, 1885:—Why it is that an inflammation of the pleura should in one case be speedily followed by a purulent accumulation, and in another continue indefinitely with no such tendency, is a question which in the present state of our advancement cannot be answered. But are inclined to look upon the constitutional condition as determining the nature of the inflammation for several reasons: (1) Because the subject is almost invariably in a state of constitutional depression and the inflammation of a low grade. (2) Because the disease is sometimes the result of traumata, which rarely if ever determine the character of the inflammation which followed. (3) Because it now and then supervenes upon a pleuritis, which in the beginning had no such tendency. In other words, whenever the constitutional condition becomes favorable to it, pus is the result. (4) Because there is nothing in the local condition, save the result which would distinguish it from the non-purulent variety of the disease.

The chief sources of danger are four in number: (1) Dyspnoea—a mechanical interference with respiration caused by effusion. (2) A perforation of lung and bronchi, inducing suffocation. (3) Sepsis from absorption of the fluid. (4) A continuation of the membrane to suppurate, although evacuation has been accomplished, thereby producing a hectic condition of the system.

The management that will most safely steer your patient over these dangers is the desideratum.

Prof. T. G. Richardson of New Orleans has practiced trephining, and in some cases resecting a rib, or even ribs. I have seen the trephine used once, and think either this or resection invaluable in adults when the ribs are in close proximity and where they become imbricated in the contraction usually associated with recovery; but in the child, where the anatomical obstruction to drainage does not exist, the necessity for the bone operation does not pertain, and too, the increased liability to deformity would be a contra-indication to the operation.

The writer then describes the operation of opening the pleural cavity and washing out its contents with a warm solution of bichloride of mercury, and subsequently washing out the cavity daily for four weeks in the case reported. The benefits of the operation are: (1) It relieves promptly the mechanical impediment to respiration. (2) It diminishes the dangers of internal perforation. (3) It diminishes the dangers of septicæmia. (4) It gives the

membrane an opportunity to heal or become united. (5) It allows applications to be made, in case the necessity should arise. (6) It diminishes the chances for developing pneumothorax.

### PNEUMOTOMY.

From an editorial by A. Pearce Gould, M.D., in the *Annals of Surgery*, April, 1885:—Under the caption—Pneumotomy—Cartaz (*Gazette Medicale de Paris*) discusses the operation of opening and draining pulmonary cavities, reserving the name of pneumectomy for that of excision of a part of the lungs.

Like other writers he divides the cases for which the operation may be undertaken into three groups, and he discusses its value in each separately.

1. *Pulmonary Cavities in Phthisical Patients.*—These afford about three-fourths of recorded cases. In no case has a cure been obtained, and the only improvement gained by the operation has been a lessening of cough, expectoration and fever. On the other hand, the operation has caused serious hæmoptysis, and the relief obtained can be secured by medical means. Cartaz is of the opinion that it should be entirely abandoned.

2. *Bronchiectasis in Non-tubercular Patients*, this diagnosis being established by the absence of bacilli in the sputum. The case recorded by Lauenstein (*Centr. f. Chir.*, No. 18, 1884), is the only one in which a permanent cure has been obtained, and having regard to the fact that the bronchial dilations are but rarely single, and that therefore the operation can not be curative, Cartaz rejects it in this group of cases also.

3. *Localized Purulent and Putrid Collections* whether due to suppuration—simple or traumatic—gangrene, or suppuration of hydatid cysts. There have been already recorded seven cases of complete recovery when the operation has been performed for these conditions.

Cartaz considers that the indications for surgical interference are the existence of a clearly defined and localized gangrenous focus or putrid collection of pus, draining imperfectly, or not at all, into the bronchi and causing hectic fever and emaciation. Where surgical interference is called for he considers that to operate upon the supra or sub-clavicular regions of the lung is too dangerous to be practicable, and that the part of the lung covered over by the scapula is almost inaccessible. The cavity should be opened at its most dependent part and a rubber drainage tube placed in it, a rib being excised only when absolutely necessary. A counter opening is not necessary in all cases. Care must be taken not to remove the tube too soon, and to see that the cavity really heals up from the bottom. Cartaz considers that in any case demanding operation the two surfaces of the pleura will be found adherent, but he advises an exploratory puncture to determine this point. The lung having been exposed by a bistoury, he favors the division of the lung tissue by the thermo-cautery, as affording protection against hæmorrhage, which may be serious where a knife is used.

### CIRCULATORY ORGANS.

#### THE HEALING OF ARTERIES IN MAN AND ANIMALS AFTER LIGATURE.

By J. COLLINS WARREN, M.D., of Boston, Mass.

From the proceedings of *Amer. Surg. Ass'n*, April, 1885:—In a paper embodying the results of a number of experiments upon animals, Dr. Warren said that after ligation until the process of cicatrization has been completed changes take place not unlike those following fracture of a long bone. There is in both an external and an internal callus, the former having only a provisional existence in the case of arteries, and subsequently giving place to ligamentous union of the divided fragments; the latter undergoing such changes in the later stages of the process that the canal or lumen of the



vessel is imperfectly re-established by the so-called canalization of the thrombus.

In the meantime the walls of the vessel have undergone certain changes which enables them to participate in the final process of repair. The ligatured artery is invested by a protective layer of new tissue formed from the periadventitial tissue, which, if well developed, gives great security against hemorrhage until the permanent cicatrix has grown sufficiently strong. This may be likened to the provisional callus of bone. There is also an internal growth or callus formed from several sources,—namely, the intima to a slight extent, the media more largely, also from cells finding their way from the periadventitia at a late stage, through the retracted ends of the vessel. The thrombus is a mere passive structure, takes no part in the growth, but is protective, and affords an excellent medium for the new tissue to germinate in. When the provisional part of the internal callus has disappeared, we find remaining a cicatrix closely resembling the three coats of the artery, and affording by virtue of its peculiar structures an equally effective resistance to the pressure of the blood-column. The ligament which unites the two ends of the vessel represents in part the residue of the external callus, but also a portion of the walls of the vessel which have been absorbed during the inflammatory process. A vessel successfully ligatured in its continuity cannot, therefore, be said to have been “ulcerated” into two separate portions, but must be conceived of as a hollow tube which has solidified into a solid columnar mass of tissue, a considerable portion of which subsequently shrinks into a cord.

Dr. N. Senn, of Milwaukee, called attention to the facts that in these experiments not the minimum amount of damage has been done to the vessel in applying the ligature, and they were not done under antiseptic precautions to prevent the entrance of external agents into the wound from the atmosphere. It is evident that the healing of arteries after ligation is due to connective tissue and its allies the epithelial cell and its congeners. To bring about closure of the vessel it is only necessary to bring its walls in contact; the use of greater force only increases the danger of suppuration. The ligature is not applied in order to divide the middle or internal tunic, but merely to bring the walls in contact with each other, when the vessel closed by primary union or by granulation. When a permanent ligature is applied, it is either absorbed or leads to necrosis of the vessel. The ideal ligature is one which would merely keep the walls of the vessel together until its lumen is obliterated, and then be absorbed or removed.

He could not accept Dr. Warren's views that muscular fibres participated in the process of repair; he thought, on the contrary, that upon cessation of the function of the artery its muscular tissue would undergo fatty degeneration and atrophy. He believed that the occurrence of aneurism is only prevented by the development of connective tissue strong enough to resist the intra-arterial tension.

Dr. Gunn, of Chicago, said that for twenty-five years he had been revolving in his mind a method of tying the innominate artery, which he had had no opportunity of putting into execution. After exposing the vessel, he would place a strong silver wire loosely around it and fasten it. He then would introduce the forceps and flatten the loop from side to side, so as to bring the walls of the artery in contact and obliterate its lumen. After hearing Dr. Senn's paper last year on the use of double ligatures, he believed that this would be an admirable way of tying the innominate.

Dr. Warren said that he would agree with what had been said, that the amount of thrombus and inflammatory products thrown out is in direct proportion to the amount of traumatism, but he doubted, even with antiseptic precautions, that one could get entirely rid of the external callus. Ligature of the vessels he alludes to the ring of new tissue supplying the place of the catgut ligature after it had been absorbed. Dr. Senn referred to primary union. In the speaker's first experiments he met some cases in which he thought that this had occurred, but careful microscopic study had shown that invasion of granulation-tissue had taken place from without.

With regard to the question of the closure of the vessel without injury to the intima, he quoted Cohnheim's experiments showing that as long as the internal tunic remains healthy the blood remains fluid, but as soon as it is injured a thrombus begins to form.

With regard to the part played in healing of arteries by the muscular fibres, he said that these are not the striped muscular fibres, but the unstriped which are closely allied to connective tissue.

### THE RUPTURE OF VEINS.

From an editorial in the *Boston Med. and Surg. Jour.*, Feb. 26, 1885:—The accidental rupture of a superficial varicose vein is an accident of so frequent occurrence that few practitioners of long standing have failed to meet with an example. The rupture of internal veins of any size, in the absence of serious accidental injury of neighboring parts, is of so infrequent occurrence that few practitioners have ever thought of its possibility. The rupture of an artery giving rise to traumatic aneurism is a well recognized accident, but there are many reasons why the veins should escape similar injuries. The fact that veins are liable to rupture, and that a ruptured vein may behave like a ruptured artery, causing an affection analogous to that named traumatic false aneurism and requiring similar treatment for its relief, is set forth in an article by Dr. Henry B. Sands, in the final issue of *The Archives Medicine*. That the accident deserves special consideration, by and for itself, Dr. Sands has well shown. That the subject is scarcely alluded to in systematic surgery is sufficient excuse, if excuse is necessary, for drawing attention to the matter here.

The case which drew Dr. Sands's attention to the subject was briefly as follows: A gentleman, fifty-one years of age, while walking in the street was suddenly seized with a sharp pain in the left thigh so severe as to compel him to return home in a carriage. On the following day slight swelling of the thigh was noticed, and three or four days later ecchymosis of the upper and anterior portion of the thigh and of the scrotum. Continued pain, increasing swelling, and extensive discoloration marked the progress of the case for the next two months. No positive diagnosis was reached. It was imagined to be scorbutic; it was suspected to be a traumatic aneurism. Two months after the attack the swelling occupied the inner and posterior portions of the upper two-thirds of the thigh, the affected limb being six inches greater than its fellow. The skin covering the tumor was stained in various hues by blood which had evidently come from a deep seated extravasation. Much of the swelling was indurated, but fluctuation was well marked at its lower and inner part. At first sight it seemed to pulsate, but careful examination showed that the pulsation was limited to the femoral artery, which could be seen and felt beating from Scarpa's space as far down as the lower end of Hunter's canal, which had apparently become superficial in consequence of a displacement of the sartorius muscle from the pressure of the swelling beneath it. The tension of the tumor was only moderate, but the patient alleged that at times it had been very great; an item of the history which attracted little attention, but which was subsequently shown to be of great importance. No thrill or murmur could be detected, nor did compression cause reduction in its bulk. Pulsation could be felt in the arteries below the tumor. A hypodermic syringe withdrew dark-colored semi-fluid blood but no pus. The effusion was recognized as coming from a vein, and absorption was still hoped for; but seventeen days later, suppuration being again suspected and some indications of septic poisoning appearing, it was decided to lay the tumor open by free incision; but during the administration of ether it suddenly grew large and became exceedingly firm and elastic. Such a change could be accounted for only upon the supposition that the cavity communicated directly with some large blood-vessel. On incision the swelling was found to be filled with blood, mostly coagulated. Most of the coagula were soft and dark-colored, but a globular mass, about the size of a lemon, which escaped last, was light in color, quite firm, and distinctly laminated. An elastic tourniquet allowed a satisfactory inspec-

tion of the cavity, at the bottom of which blood was seen trickling from a lateral opening in a vein of considerable size. The direction and situation of the vein was that of the *venae comites* of the profunda artery, and a ligature was applied above and below the opening by means of an aneurism needle. Four months afterward the patient was entirely well. In this case the absence of cardiac lesion, external violence, or unusual muscular exertion warrants the suspicion that the vein was abnormally weak at the seat of rupture, which suspicion is corroborated by a varicose condition of the long saphena vein of the opposite limb.

#### CURE OF ANEURYSM OF THE ABDOMINAL AORTA BY LAPAROTOMY AND INTRODUCTION OF SILVER WIRE.

From the *Boston Med. and Surg. Jour.*, April 9, 1885:—The attempt to cure an aneurysm by coagulation of the blood through the introduction of foreign bodies into the sac has been tried on several occasions. Moore, in 1864, used iron wire; Levis, in 1873, horsehair, of which he introduced about twenty-five feet into an aneurysmal sac; Bacelli, fine watch-springs; Schrötter, in a case lately reported, introduced into an aneurysm of the thoracic aorta 126 cm. of Florence silk through a canula in divided portions at two insertions. This patient died fifteen days after the second operation of pulmonary oedema, and the autopsy showed that the sac of the aneurysm, which protruded from the wall of the chest, was entirely filled with coagulated blood.

In the *Deutsche Medizinische Zeitung* of March 23, 1885. Loreta, of Bologna, reports a case of aneurysm affecting the abdominal aorta, which was not only successful but the success followed laparotomy. The patient, a sailor, aged thirty, had suffered for two years. The examination showed the following facts: The man was pale and emaciated. In the epigastrium was noticed a pulsating tumor of the size of the head of a nine months' fœtus. Auscultation revealed a prolonged blowing murmur loudest in the left half of the abdomen. On these and other grounds the diagnosis was made of a sacculated traumatic aneurysm of the aorta. In view of the discomfort, pain, and extreme emaciation, death was to be expected unless prompt relief could be given. Therefore Prof. Loreta concluded to perform laparotomy with the object of separating the aneurysmal sack from the blood current. The operation was performed on December 18, 1884. An incision was made from the ensiform process to the umbilicus. Strong and extensive adhesions between the peritonæum omentum and stomach were separated, the meso-colon was cut through, and the organs drawn aside till the tumor was exposed. The walls of the aneurysm were so thin that it was feared that a ligature applied below the sack might produce rupture; the operator therefore concluded to introduce a wire into the sack to produce coagulation of the blood. With a slender trocar he made a puncture and carried through the canula as much fine silvered wire as the space in the sack allowed: in all, two meters. The outer end of the wire was also pushed in.

The opening was touched with a concentrated solution of carbolic acid in order to shrink the tissues, the abdominal organs were brought back to their original position, and the wound sewed. The operation lasted an hour and a quarter.

Twenty days after the operation no trace either of pulsation or of murmur was to be found, and the sack was about the size of a nut. The patient is now completely restored and can resume his occupation.

#### BULLET WOUNDS OF THE HEART.

Dr. H. L. HARRINGTON, of Monmouth, Ill., details in the *Medical Record*, May 9, 1885, a very remarkable case, which came under his observation while House Physician in Cook County Hospital, Chicago, in the year 1875. One evening at dusk, a man, aged about thirty years, was brought in an express wagon, rapidly driven over rough pavements a distance of over

a mile, with a bullet-wound of the left side; he was in a condition of profound shock, and was treated accordingly, by means of heat externally applied, stimulants and morphia internally. Reaction ensued, and progressed sufficiently to admit of his moving about in bed, and talking in a loud voice, when he suddenly died, three hours after receiving the wound. An autopsy made by me the next morning revealed the fact that the bullet had perforated the apex of the heart, traversed the entire length of the left ventricle and auricle, and, after passing upward through the right lung, had become imbedded in the right shoulder.

## ALIMENTARY ORGANS.

### ORGANIC STRICTURE OF THE ŒSOPHAGUS.

By WILLIAM PEPPER, M.D., LL.D., Provost and Prof. of Clin. Med. in the Univ. of Penn.

From a Clin. Lecture published in the *Medical Bulletin*, March, 1885:—J. B. æt. 54 years, drank by mistake, a year ago, a quantity of caustic alkali. This burned his mouth a good deal, and it was at once thrown off. Ever since that time he has had difficulty in swallowing. The food appeared to stop at a certain point in the œsophagus. There is a hard stricture about five inches above the cardiac orifice of the stomach, so tight that a small bougie will not pass it.

The attacks, which have been described, are not uncommon in stricture of the œsophagus, and we must not let them throw us off our guard. This temporary increase of the difficulty is due, not to the stricture, but to a condition of irritation. There is excited, perhaps, from the strong efforts at swallowing, such a degree of spasmodic contraction of the walls of the œsophagus that scarcely any liquid will be allowed to remain. When this spasm is allayed, he can take nourishment much better.

Nothing will do this man so much good as the passage of large bulbs down to the stricture, and cautious attempts to pass small bulbs through the stricture. The size of the bulbs will be gradually increased until the upper part of the canal is dilated. These will be used every other day.

In this case there is no question as to the nature of the stricture. Its position is also significant of organic stricture, the result of an injury. Strictures from malignant disease usually occur either higher up or lower down, near the cardiac orifice, and not midway in the tube as in this case. The way in which the patient's health has been preserved in spite of the serious interference with nutrition which this stricture has caused, is another proof that there is nothing malignant about it.

The prognosis is, therefore, on the whole, good. We shall be able, I think, by careful and patient work to overcome this constriction. After the stricture has been dilated, it will be necessary to continue the treatment in order to keep it open. It is just as in the case of stricture of the urethra. Although the stricture may yield gradually to dilatation, there is a marked tendency to recur. The bougie must be used at intervals for an indefinite period. The seat of this stricture is, of course, too low to permit of any attempt to nick the stricture, as can sometimes be done when it is located in the upper part of the tube.

*Organic Stricture of the Œsophagus, due to Malignant Disease.*—This man has also a stricture of the œsophagus, but in his case the contraction is not the result of the cicatrization of an ulcer, but there is every reason to apprehend the slow formation of some morbid growth. The progress of the case has been extremely gradual, and our attempts at dilatation have not completely failed, consequently the prognosis is not so bad as regards the early termination of the case as it is in many instances of this disease.

He first noticed difficulty in swallowing one year ago. His parents are both dead. There has been no history of cancer in his family. From his

history he is supposed to have had a non-infecting chancre twenty years ago. There were no secondary symptoms. I think that it would be a stretch of the imagination to suppose that this was a case of syphilitic ulceration of the œsophagus terminating in stricture. His weight when he first came here was 180 pounds, having lost forty pounds in four months. Dr. Hughes began the treatment with bougies. At first the smallest size could not be passed. By perseverance the œsophagus was dilated so as to admit the passage of quite a large bulb, and he gained weight on the average of three pounds a week until he reached 147 pounds. He now weighs 125 pounds.

This case presents some unusual features, but not so uncommon as to alter the conclusion which has been reached. The unusual features are, in the first place, the man is rather young to have malignant disease. I may, however, say here, that according to my observation, this part of the digestive canal is attacked with malignant disease at rather an earlier age than other portions. I am also inclined to think that malignant disease of the intestine occurs at an earlier age than malignant disease of the stomach. I will not assert positively that this is so, for statistics of a larger number of cases might show that it was an error. In the second place, there was certainly an unusually rapid development of the obstructive symptoms. The ordinary history of a case of carcinoma of the œsophagus is, that at first it is noticed that the food begins to stick, but the patient continues to eat his ordinary food. Then, after a month or two, meat and hard food must be given up, and the patient lives on oysters, bread, potatoes, and other vegetables. After a time he gives these up, and comes to thick liquids, such as thick soups and cream, and finally nothing but thin liquids can be taken. In the present instance, the symptoms very rapidly reached a considerable degree, and then did not tend to progress beyond that point. This was followed by a considerable loss of flesh. You will notice that this was not due so much to the malignant disease as such, as it was to the impairment of the power of swallowing, for as soon as the stricture was dilated and he could take food more readily, he gained flesh as rapidly as he had lost it, and gained twenty pounds of the forty which he had lost. On one occasion a piece of the growth was removed with the bougie, and examination with the microscope showed it to be a papilloma.

The œsophagus has become very sensitive from the repeated use of the bougie, yet the beneficial effects of the passage of the bougie have been so marked, that it is worth while to continue its use. There are some cases of stricture of the œsophagus in which dilatation yields very little result. The stricture may be dilated, but in a few days it is as bad as before, and the benefits to swallowing are almost inappreciable.

In this case, the treatment rests between a course of dilatation, repeated daily, and the introduction of a soft œsophageal tube, which is left continuously in the œsophagus, and through which the fluid is poured into the stomach. This method of more thorough feeding, which at the same time secures some continuous dilatation of the stricture, is worthy of a trial. In some cases it has been followed by rapid, although, of course, temporary improvement, the duration of which will entirely depend on the nature of the organic disease, and the rate at which it is developing.

#### FOREIGN BODY IN THE STOMACH.

From a letter by the Vienna Correspondent for the *Medical Record*, May 2, 1885:—A girl, nineteen years of age, swallowed in her sleep her false teeth with plate. She immediately made strong attempts to swallow, and the foreign body was carried down to the cardiac orifice of the stomach. Endeavors to get it out not succeeding, she came to the clinic. A bougie could be passed now directly into the stomach without meeting any obstruction. Professor Billroth said that bodies of this size and shape could with difficulty pass the cardiac orifice, but he knew of no case where they had passed the pylorus. The patient complained of a slight tenderness on pressure in the gastric region, otherwise she had no pain. Nothing was felt by the bougie or by external examination. The assertions of the patient were

quite positive, however, and Professor Billroth decided to open the stomach. He made a cut, two fingers' breadth, below the edge of the ribs and to the left of the median line, about an inch long, and tried with forceps to grasp and extract the body, but none could be found. The cut was enlarged, and the stomach-wall drawn well forward and out of the opening, but nothing was found. Turning to the audience, Professor Billroth said he had never before had such an opportunity to examine thoroughly the abdominal organs in the living being, and the temptation to do so was too strong to be resisted. The cut was then still more enlarged and he then introduced his hand and part of the arm into the abdominal cavity, talking about the organs as he examined them. He said it was surprising how very soft the liver felt, it was hardly to be distinguished from the intestines. The gall-bladder was well distended. The kidneys were both remarkably movable; slight pressure pushed them downward at least an inch. The bladder was tensely distended. The uterus and both ovaries felt hard and firm. The foreign body was not found. He now introduced his hand into the stomach, and in the upper and backward part grasped and removed the false teeth-plate. The examination was slightly difficult, because of traction caused by the ligamentum gastro linelis. The wound was then completely closed up with silk stitches and dressed with iodoform gauze. Professor Billroth said that he had discovered what he had not before known, that in drawing the stomach forward and out the portion attached to the diaphragm prevents its being entirely brought forward, and forms a pocket which completely conceals anything lying in it.

About two weeks later the patient was reported in good condition, the wound had closed up as usual when the dressing was first removed after eight days, and she was convalescent. The examination, Professor Billroth stated, had not been in the least injurious to her.

#### THE TREATMENT OF ILEUS.

From an editorial in the *Medical News*, April 4, 1885:—Although laparotomy has come to be recognized as one of the justifiable measures in the treatment of intestinal obstruction, it is a resource which, on account of its radical character, will probably always be the last adopted. It is gratifying, therefore, to be able to add one more remedy to those already existing, which may, without any risk of harming the patient, possibly avert the necessity for so formidable an operation. Such a resource has been recently brought forward by Kussmaul and Cahn, in the *Berliner klin. Wochenschrift*, Nos. 42 and 43, 1884, and still more recently by Dr. C. Hasenclever, in a paper read before the Berlin Medical Society, and published in the same journal, No. 5, 1885. It consists in washing out the stomach. Hasenclever reports six cases, in all of which marked relief was afforded, although only two recovered, the autopsies in the remainder revealed other serious lesions which necessarily render any treatment futile. Cahn reports three cases from Kussmaul's clinic, of which two recovered.

Still more recently, Dr. J. T. Whittaker read a paper on this subject before the Cincinnati Academy of Medicine, an abstract of which, together with the discussion which followed, is published in the current issue of this journal. Two cases are referred to by Dr. Whittaker as occurring in his own practice, one by Dr. J. L. Cleveland, and another by Dr. William Judkins. The cases of Whittaker and Cleveland, although relieved, died, but that of Judkins recovered. It would seem also from Dr. Whittaker's paper that the primary suggestion of this treatment came, not from Germany, but from Cincinnati, and from Dr. Cleveland.

As soon as the diagnosis of obstruction is made, the stomach should be washed out once or even twice a day. In this way often large quantities of fecal matter, mucus, and gas, are removed, while the singultus and stercoraceous vomiting cease, and the patient experiences marked relief. Spontaneous fecal evacuations also sometimes follow. The irrigation is practised until the patient is completely relieved, or the procedure is shown to be useless. The washing is continued until the fluid comes away clear.

The rationale of this treatment cannot be definitely stated. By the irrigation, one element of the trouble is at least removed—the distention of the stomach and upper part of the intestine, because, as was shown by Oser, in the *Wiener Med. Blätter*, 1884, No. 41, the operation not only cleans out the stomach, but the small intestine as well; and this, too, as effectually, where there is insufficiency of the pylorus, as in acute and chronic intestinal obstruction.

As to the curative action of this treatment, where there is no insuperable obstacle against the reestablishment of the natural evacuations, Kussmaul suggests the following explanation: 1. By removing the large accumulation of fluid in the intestine, more space in the abdomen is provided, and the enormous distension of certain parts at the expense of others is avoided. 2. The peristaltic movements of the intestine, above the point of obstruction, previously violent and irregular, become more quiet and regular. 3. It is only possible to remove a remedial obstruction, such as a bend or an invagination.

Among the other purposes for which Kussmaul's procedure has been suggested, is biliary colic, due to impacted gall stones. At a recent meeting of the Berlin Medical Society, Rosenthal reported two cases treated in this manner. One was that of a woman of 33, who had been six months under his care with successive attacks of biliary colic, for which all the usual measures had been resorted to, morphine alone giving her relief. He then washed out the stomach, with a view to obtaining the sedative effect to which attention had already been called by Senator. As an apparent consequence, the vomiting, which had been troublesome, ceased. She returned almost daily to have the operation repeated, and on the fourteenth day she brought with her two gall stones, each about as large as a hazelnut. Since then she has had no recurrence of the symptoms.

The second case was also that of a woman who suffered from very severe attacks of hepatic colic with obstinate vomiting, and after washing out her stomach for a few days, not only did the vomiting cease, but the stones were also passed.

### HERNIA AND THE APPLICATION OF TRUSSES.

By EDMUND A. ANDREWS, M.D., Sen. Surg. to Mercy Hospital, Chicago, Ill.

From the *Jour. Amer. Med. Ass'n*, February 21, 1895:—The principles involved in the fitting of trusses are these: (1) The hernia must first be reduced. No patient can bear an ordinary truss pressing upon the intestine. (2) If the hernia is oblique, apply the truss squarely upon the internal ring, or a trifle downward and inward from that position. (3) If the hernia be a "straight" one, or if it be a direct one, apply the pad upon the external ring, but do not put it upon the os pubis. No patient will tolerate the instrument if it pinches the skin against the bone. (4) When applied, have the patient test it by coughing, straining, running and jumping. If it holds the gut, under these tests, and does not slip from its position nor hurt him, it will be for him a good truss, whether it fits anybody else or not. The main point is to be comfortable to the patient, and to hold the gut. These ends being secured, the numerous minor modern improvements are of secondary consequence. (5) In fitting peculiar cases, the minor points come to the surface, and are briefly these: A person who sweats copiously destroys woven and leather covers, and rusts steel springs rapidly. Celluloid covers last such cases longer. The pad should be proportioned to the size of the ring, not plunging into it like a plug, nor spreading all around it like a flat wheel. Perineal bands are useful in some cases, especially in femoral hernias.

Cup-shaped pads are useful in some irreducible hernias, as suspensory bags in others. Belt-trusses do well in umbilical hernias; but spring-trusses serve also, if the rupture be not large. Springs, with a hard spring-temper, keep their shape best under long wear; but if they do not fit well, they cannot be altered. A softer temper enables you to modify the shape of the spring to fit the peculiarities of the individual form; but if it be a little too soft, the spring will slowly yield and require to be frequently bent in again to main-

tain the pressure. Leather or silk-covered pads are pleasing at first, and hold their positions well; but as they become soiled or rotted with sweat, they require repairs. Wood, ivory, celluloid, and other hard substances last very much longer, but are more expensive at the outset.

### THE VALUE OF "FORCED DILATATION" OF THE ANAL SPHINCTERS IN THE CURE OF CONSTIPATION, ETC.

By EDWARD M. SCHARFFER, M.D., of Baltimore.

From the *Medical News*, March 7, 1885:—The occurrence of reflex spasms in parts more or less remote from the seat of irritation is a well-known fact, the recognition of which has been much extended of late years by the labors of Sayre, Otis, and others, in their respective departments.

In regarding the nervous derangements and actual paralysis often associated with congenital phimosis, also, the spasmodic strictures, irritable bladders, and neurasthenic disorders relieved, coincidentally, with the section of urethral contractions and narrowed meatuses, *analogy* has suggested the application of this principle of cure in cases of obstinate constipation, fecal accumulation, etc., in addition to its more common, though, probably, still infrequent, employment for fissure, hemorrhoids, chronic ulcer, and spasmodic contractions of the anus.

Setting aside theory—this simple, mechanical procedure, viz., complete dilatation of the sphincter ani muscles, has been strongly advocated abroad, in France and England, and also by the late eminent author, Van Buren, of New York, as an efficient *substitute* for the knife in the above painful affections. The latter writer, in his work on "Diseases of the Rectum" (p. 93), after crediting Récamier, of Paris, with the original suggestion, describes his method as follows, preferring the use of his fingers to any mechanical instrument: "Introduce both thumbs well beyond the external sphincter, back to back; then, taking a purchase from the buttocks with the outspread fingers, carry the thumbs forcibly apart until their palmar surfaces are arrested by the ischial tuberosities. The stretching is carried far enough to paralyze the muscles temporarily, and thus annihilate their contractile power for a few days.

Allingham, in a similar work, recommends this mode of procedure most highly, and calls it, in properly selected cases, a really admirable treatment. I find also this language bearing on the special theme of my paper (*loc. cit.* p. 58, pamphlet ed.):

"Spasm of the sphincter has been said to be a cause of impaction, but I have more often thought the reverse was the case, and the impaction the cause of the spasm. I must, however, acknowledge that spasm is often the cause of the *constipation*, which is the forerunner of impaction. In impaction spasm of the sphincter always exists. I have certainly met with cases of idiopathic spasm of the sphincter, occurring for the most part in elderly, nervous, single women, and though no impaction was present, there was always more or less constipation."

My attention was first directed to this subject in the practice of Prof. Alan P. Smith, who has, for several years, found sphincter dilatation most serviceable in conditions of anal spasm, hemorrhoids, fecal impaction, etc. I am, therefore, largely indebted to him for any suggestions here advanced, also for the privilege of adding three cases to my own report.

### DILATATION OF THE SPHINCTER ANI IN DISEASES OF THE RECTUM.

By WILLIAM F. WAUGH, M.D., Prof. Practice of Medicine, etc., Medico-Chirurgical Coll., Phila.

From the *Med. and Surg. Reporter*, March 14, 1885:—In several recent journals I have noticed dilatation of the sphincter ani recommended by French surgeons as a new method for the treatment of hemorrhoids. There is nothing new in the operation, which is described at length in Allingham's excellent work on rectal diseases, where the credit of bringing the method before the profession is given to Verneuil.



Taking this for my text, I propose to show that in other affections in which we find spasm, or at least too powerful contraction of the sphincter ani, the operation of dilatation is of use, by putting the muscle at rest.

A butcher, aged 26, came to me for relief from an attack of piles. He had been subject to the disease for years; usually suffering from an acute attack twice a year.

He experienced so much difficulty in emptying his bladder that he requested me to see if he were not affected with stone. Prof. Gerhard administered an anæsthetic, and I forcibly dilated the sphincter ani to its fullest extent, carefully going round the whole circumference until every portion of the muscle was completely softened, and the anus replaced by a large gaping orifice. Some soreness was felt after recovering consciousness, but the next day, and each day subsequently, he was back at his stand in the market, not losing an hour on account of the operation. For a few days he had to attend promptly to the calls of nature, but after that he regained full control over his rectum, and at no time was he seriously inconvenienced by its temporary paresis.

But the most striking feature of the case is that the difficulty in emptying the bladder was also relieved completely by the same operation; and it occurs to me that in some cases of vesical tenesmus dilatation of the sphincter ani might give relief. This is made more probable by the history of my second case.

The four-year-old son of the man whose history I have just given was seized with colic some weeks after his father had been operated upon. For ten days I gave him anodynes, laxatives, and carminatives; and in spite of them, the poor child cried with pain a large part of each day. Careful examination revealed no adequate cause for the pangs, and I was about to express the opinion that he had a foreign body impacted in his intestinal canal, when the mother told me he had to strain a long time before he could urinate. I endeavored to introduce a sound to examine his bladder; but not succeeding, on account of his resistance, I passed my index finger into his rectum to obtain some information as to the state of his bladder in that manner. I found nothing abnormal; but on withdrawing my finger, he ceased his cries, and the colic was cured. Nor did the pains alone disappear, but the straining to urinate also ceased; and since then he has no difficulty whatever in promptly emptying his bladder.

A gentleman came to me for relief from a fistula in ano. It was a complete fistula, the external opening an inch from the anus and the internal so high up the rectum that I deemed it imprudent to cut. I therefore administered an anæsthetic and dilated the sphincter with my thumbs in the same careful and thorough manner as in the preceding case. I then introduced an elastic ligature, drew it tight, and fastened it with a pewter clamp. Unfortunately, I pinched the cord too tightly in the clamp, and three hours after the operation it broke, and clamp and cord came away. Owing to the pressing nature of the gentleman's business, it was a month before he could come to me to have the operation repeated. On examining the fistula, I found it had healed completely. As the elastic cord can hardly be held to have any healing properties, I can only believe that the cure resulted from putting the sphincter at rest by dilatation.

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## URINARY AND GENERATIVE ORGANS.

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### ON SENILE HYPERTROPHY OF THE PROSTATE.

By ALFRED C. POST, M.D., LL.D., of New York.

In an elaborate paper published in the *New England Medical Monthly*, April, 1885, Dr. Post gives the following:—*Summary of Treatment*.—Retention of urine from enlarged prostate should always, when practicable, be relieved by the introduction of a catheter. This can be accomplished in the vast majority of cases.

When the catheter cannot be introduced, and the outlines of the distended bladder can be traced above the pubes by palpation and percussion, the aspirator should be employed to evacuate the bladder through a puncture in the hypogastric region.

When an aspirator is not at hand, and the distended bladder can be distinctly felt by a finger introduced into the rectum behind the prostate, it may be punctured by means of a long curved trocar and canula, guided by the finger.

When the bladder cannot be felt by a finger in the rectum, it may be punctured above the pubes.

### CYSTITIS AND IRRITATION OF THE PROSTATE.

Dr. R. A. REED in *Med. Gaz.* gives the following differential points:

#### CYSTITIS.

A constant desire to void the urine.

Great straining and tenesmus during micturition.

Urine ammoniacal, high colored and often loaded with mucus and pus.

Little or no tenderness of the prostate.

Pain and uneasiness over the pubes.

Epithelial casts of the bladder.

No cast of the prostatic ducts.

No pain in passing the catheter, except after reaching the bladder.

Desire for copulation not increased, but usually diminished.

Generally marked constitutional disturbances.

—*Weekly Med. Review.*

#### IRRITATION OF THE PROSTATE.

Micturition more frequent, but not a constant desire, which is increased toward the afternoon and evening.

Weight and bearing down in the perineum. A slight smarting or tingling as the urine passes the prostate, accompanied with a prickling or burning sensation in the glans penis.

Urine not much changed, excepting it is abnormally acid, and more highly colored.

Marked tenderness over the prostate.

Pain and uneasiness in the perineum.

No epithelial casts of the bladder.

Casts of the prostatic ducts in the catarrhal form of irritation.

Pain in passing the catheter marked along the prostatic urethra.

Desire for copulation increased rather than diminished.

Seldom any marked constitutional disturbances.

### THE TREATMENT OF GONORRHEA AND ITS SEQUELÆ.

By J. WILLIAM WHITE, M.D.

From the proceedings of the *Philadelphia Co. Med. Soc.*, March 29, 1885:  
—The use of preventive injections is so wide-spread among certain classes that it will be well to say a few words in regard to them. There are certain injections, especially those of a diluent, astringent or disinfectant character, which have a great reputation. The chief of these are carbolic acid solutions of various strengths, Labarraques' solution, phenol-sodique, dilute lead water, Monsel's solution, some preparations of iodine, and I have even known the glycerole of iodine to be used. In so far as these injections contribute to cleanliness they are useful, but all the good derived is counterbalanced by the unwarranted feeling of security which their use affords. They are not to be encouraged by the regular profession.

The abortive treatment consists in the use, immediately after the appearance of the first symptom, of some irritative injection, which is intended to substitute for the specific inflammation a simple inflammation which is supposed to run a milder course and to be more amenable to treatment. I do not believe that there is any sufficient evidence, either theoretical or clinical, to show that they accomplish this object.

The curative treatment, I have found, and suppose that others can say the same, to be more or less unsatisfactory. Dr. Maury used to say that of all cases that came to him there was none in which he had so much hesitation in giving a definite prognosis, either as to time of cure or freedom from complications, as gonorrhœa.

If the patient can be induced to assume a recumbent position, with the hips elevated on a hair pillow, as much will have been accomplished as can be by any drugs. The value of this is seen in hospital practice. Hospital gonorrhœas are more amenable to treatment, run a shorter course, and have fewer complications than cases in private practice.

In order to overcome the irritating characters of the urine, strict rules in regard to eating and drinking should be given. I think that the very best diet in the earliest stages, is a skim-milk diet. Salad dressings, mustard, vinegar, salt, pepper, and asparagus are to be particularly avoided. Everything which has a stimulating effect on the genito-urinary apparatus is to be excluded. The diet should consist chiefly of milk and farinaceous articles. The free use of diluent drinks should be encouraged, and plain water, three or four quarts a day, is as valuable as any. An alkaline diuretic, as bromide of potassium with acetate of potassium in neutral mixture, and often combined with this a few drops of tincture of aconite and of belladonna, may be used.

In addition to the above directions, I usually confine myself at the first visit to ordering a proper dressing. The best dressing depends on the character of the fore-skin. If it is long and pendulous, a little piece of absorbent cotton may be placed over the meatus and held in place by drawing the fore-skin over it. If the fore-skin only half covers the glans, a piece of old linen or patent lint three inches square may be taken and a hole cut in the centre. The linen is then slipped over the glans and held in position by drawing the fore-skin forward. The ends are brought in front of the meatus and if the dressing is changed often enough, they protect the skin from the discharges. If there is no fore-skin, the best dressing is either an old stocking pinned to the undershirt or a bag of muslin. The points which I have just gone over, and which usually constitute the advice given at the first visit, are as important as any advice which is given to the patient during the progress of the attack.

I confine myself to this treatment for one week or ten days. I now rarely give anything in the way of local treatment during the first week or ten days.

It may, during this period, be necessary to give something to relieve certain symptoms, chief among which are ardor urinæ, chordee and frequent urination, which are often combined and are frequently troublesome symptoms. For the relief of ardor urinæ, I push the diuretic mixture already described, instead of giving it five or six times a day, giving it every hour or two and continuing it through the night. If there is tumefaction, I direct that the organ be wrapped in lead water and laudanum, warm or cold, as is preferred, and that urination shall be performed in a cup of hot water. I have lately tried cocaine under these circumstances, but not in a sufficient number of cases to warrant a positive opinion.

Chordee is another symptom which occurs at this stage, and is most troublesome and annoying. Many remedies for this condition have been recommended, among which the only ones which I think worth mentioning are opium in combination with camphor, in the form of a suppository, containing half a grain of the aqueous extract of opium, or one grain of powdered opium and three grains of camphor at bedtime, opium alone in the same dose, lapulin in fifteen to twenty grain doses, tincture of gelsemium in ten or fifteen drop doses every time the patient awakens with the chordee, and bromide of potassium, which is the best of all. Bromide of potassium is indicated for a number of reasons in inflammatory gonorrhœa. It is an alkali, and aphrodisiac and an arterial sedative, so that apart from the symptom, chordee, I am in the habit of using bromide of potassium in the acute stage of inflammatory gonorrhœa.

I wait for the subsidence of inflammatory swelling before using injections. When the patient reports that he has less pain in urination, fewer painful

erections, and I see that the discharge is more watery and lighter in color, I then think of the use of injections, beginning these with some caution. At first I usually use a mixture of lead water and laudanum, or the watery extract of opium sometimes with a little tincture of aconite or belladonna, or both, and watch the effect. Of late I have sometimes added cocaine. I think it better to discard them altogether if they excite severe pain. The injection of lead water and laudanum I use for three or four days, sometimes for a week, and pass from it to injections containing an insoluble sediment. The injection may contain, then, subcarbonate or subnitrate of bismuth, sulphate of zinc and acetate of lead, in which double decomposition takes place, or oxide of zinc, acetate of zinc and tannin, which precipitates the tannate of zinc, kailin or earth of any sort made into a paste with water. Any of these answers an admirable purpose at this stage.

After using these for a few days I tell the patient to stop them for twenty-four hours. If the discharge still persists, I usually employ a stronger injection. Sulphate and acetate of zinc are the two drugs which I consider of the greatest value in this subsiding stage of gonorrhœa, and they may be combined with cocaine, morphia, etc.

About the time that the first injection of lead water and laudanum is given it is usually good practice to put the patient on the so-called anti-bleorrhagics. The only ones which I use are cubeba, copaiba and oil of sandal wood.

An ordinary case, running its course without complications, will terminate in from three weeks to a month, which I consider as good an average as may be hoped for from any treatment of gonorrhœa.

In certain cases, in spite of treatment, the urethral discharge will continue, and these are the cases which give both the patient and practitioner much annoyance.

If the case is carefully examined it will be found that the patient has, at most, a drop of watery fluid in the morning or once or twice a day. There will be little or no pain on urination. They are inclined to be hypochondriacal and pay too much attention to their sexual apparatus, when the trouble is really due to lack of tone in the capillaries of the mucous membrane of the urethra, and requires very little treatment. In these cases I give a little good advice, if the patient can afford it, send him to Atlantic City, order a few drops of the syrup of the iodide of iron, a good, generous diet with a little claret or Burgundy at dinner, quinine at bedtime, and if the season is suitable, salt bathing. Under this treatment a cure will be effected in a month or two. The difficulty in these cases is to hold the patient's confidence.

The second class, that of chronic gonorrhœa, requires persistent treatment. The diagnosis between chronic gonorrhœa and gleet should be carefully made. In chronic gonorrhœa the discharge continues without intermission between it and the acute affection. This discharge is aggravated by slight provocations, by indigestion, by sexual excess, and particularly by ungratified sexual passion excitement, by alcoholic excess, cold and over-exertion; all these aggravate it, and it may be so severe as to simulate acute inflammatory gonorrhœa. It is attended with more or less localized pain along the urethra and during urination. The discharge is creamy, and careful investigation with bulbous bougies will show a point of marked tenderness, the bougie bringing away pus, perhaps streaked or tinged with blood.

This condition, I think, requires for its treatment the use of localized injections, with the employment of the syringe known as the prostatic syringe. The point of trouble is usually a superficial ulceration or a granular urethritis. The most useful injection is, nitrate of silver, using it of the strength of one-fourth to one-half a grain to the ounce, gradually increasing the strength, and using from a drachm to a drachm and a half at each injection, slowly deposited at the affected spot. If this fails there may be associated with it the gentle use of full sized urethral instruments, either steel or rubber, but they must be used with care. If they aggravate the condition they should not be again employed until the inflammation has assumed its chronic character.

The third variety is gleet, by which I mean a condition in which there is a milky or milk and water discharge from the urethra, without distinct pain

localized, in which there is a considerable interval between the gonorrhœa and the discharge. It is often associated with more or less frequent urination and hypogastric and lumbar pains. It is usually dependent upon the presence of a stricture, which is often a so-called stricture of large calibre, and requires for its treatment that of the stricture, to consider which would lead us beyond the limits of our time.

### REMEDY FOR CHORDEE.

Dr. MORRIS C. L. KITCHEN, of E. Saginaw, Mich., in the *Medical Age*, says that for two years he has been using chloral hydrate gr. x. potas. bromide gr. v-x to aq. dest.  $\frac{3}{4}$  i as an injection for chordee, and have *never* known it to fail of affording perfect relief. He usually adds morph. sulph. gr. ij. to the  $\frac{3}{4}$  i. He does not think that chloral hydrate, or this mixture is indicated in all stages of the disease, but when chordee comes on, can confidently recommend the use of it, and usually no other injection is needed afterward.

### LOCAL TREATMENT OF SPERMATORRHŒA.

By W. H. B. ATKINS, M.D., L.R.C.P., Lond.

From the *Canadian Practitioner*.—Patients have been regarded as having this affection whenever a mucilaginous fluid, having the resemblance of semen, is discharged from the urethra, though it may be and frequently is, prostatic secretion, and the microscope affords the only reliable means of determining that the discharge is seminal. On microscopic examination, spermatozoa, or clear rhomboid crystals, the so-called sperm crystals, may be seen. These latter are composed of phosphoric acid and magnesia. Trosseau, Ultzmann and some other writers make a distinction between pollution and spermatorrhœa; given as a definition to the former the copious emissions of semen which take place, accompanied by erections and a high degree of orgasm, the emissions being caused by the contraction of the muscular tissue of the vesiculae seminales and uretra; and to spermatorrhœa, that flow of semen unaccompanied by sexual feelings and with relaxed penis. The semen may be voided while at stool and during micturition.

Cushman speaks of nocturnal and diurnal pollutions and of spermatorrhœa, and considers the discharge as physiological and indicative rather of vigorous health than a condition of weakness, when the person experiences after the discharge a feeling of well-being, and as pathological when the discharge is followed by malaise.

The causes are usually divided into two classes: those connected with a lesion of the central nervous system and those where there is local irritation. In central disease of the nervous system the seminal emissions may be but a symptom.

There are many conditions giving rise to local irritation which may occasion seminal discharge—ascarides, pruritus ani, elongated prepuce, herpes præputialis, stricture, hæmorrhoids, anal fissure, orchitis, constipation, and any cause which produces a determination of the blood to the sexual apparatus. Local irritation induced by sexual excess and masturbation causes an increased flow of blood to the parts, which may, and frequently does, give rise to a catarrhal condition of the prostatic portion of the urethra, and hyperæmia and hyperæsthesia of the same.

The treatment consists in removing the source of irritation, in giving tonics and certain drugs which reduce reflex irritability and augment arterial tension. Belladonna has been found by some to act beneficially. It causes a diminution in the secretion from the testicles and assists in reducing reflex irritation. When the hyperæsthesia is marked, unmedicated gelatine bougies, or bougies of cocoa butter containing extracts of belladonna and opium, may be used, and when the irritation is lessened the metal sounds can be brought into play, or what answers a better purpose, the "cooling sound." This instrument was introduced by Prof. Winternitz. It is a metal closed catheter, having two extra vesical openings and with a partition extending down the centre to within an inch of the bill of the catheter. Its calibre is about 9

English. Two pieces of tubing are attached to the openings. The catheter having been introduced, one tube is placed in a reservoir on a higher level than the catheter, while the second portion, attached to the other opening, has its end lying in a receiving vessel on a lower level. By sucking the lower portion of tubing a little, the water flows through the divided sound, imparting to the surface in contact with the instrument a uniform coldness, and it also exerts a pressure on the prostatic portion. The water should be warm and gradually reduced to cold. This "cooling sound" may be allowed to remain in from five to thirty minutes.

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## SYPHILITIC AFFECTIONS.

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### THE EXCISION OF SYPHILITIC CHANCRE.

By EDWARD L. KEYES, M.D., Prof. of Cutaneous and Genito-Urinary Diseases, Bell. Hosp. Med. College, N. Y.

From the proceedings of the *N. Y. Surg. Soc.*, April 14, 1885.—My own opinion has been strongly opposed to the belief that local excision of chancre would prevent or modify general syphilis. It has not been my good fortune to meet with any case where excision was practised with a favorable result.

I think it not difficult to understand how apparent success may follow excision when we remember the multiple sources of possible error in diagnosis; and particularly is this the case in Germany, where the best results are alleged (80 to 90 per cent.), for there the advocates of excision are all unicists (notably Auspitz and Kaposi), and are doing their best to return all primary venereal sores into that chaos from which Bassereau and the French school have endeavored to deliver them.

The sources of error to which I refer are: (1) Inflammatory induration of lesions not syphilitic. (2) The small ulcerated gumma of the penis. (3) Non-specific sores which resemble the infecting chancre. (4) Cases of delayed syphilis.

I need not cite instances of the first two classes mentioned above. We are all familiar with the local sore of unknown incubation, with a hardness so nearly typical that we cannot ignore its peculiar quality, yet where observation without treatment has proved the absence of any true venereal taint.

The localized gumma commences as a tubercle under the skin, has all the essential hardness, and sometimes the inguinal indolent adenopathy. Its physical characters might deceive any one. It may come upon one in seemingly vigorous health, and may be the only lesion present. The patient may have forgotten his old syphilis, the last symptoms of which occurred, perhaps ten years before. I have had more than one such case. If, now, this individual has had suspicious sexual contact a month before the sore appears, his is very apt to be considered a case of re-infection. These localized gummata (pseudo-chancres) have a marked partiality for occupying the site of the original chancre—but this is not an invariable rule.

Of the third class, a sore resembling but not being a specific ulcer in any poisonous sense, I have seen a number of examples.

The third and fourth forms of disease, capable of causing error in the diagnosis of syphilitic chancre, are very uncommon; the first two, inflammatory hardening of chancroid and local cutaneous gumma resembling chancre, are very common. Whether it is possible that observers so renowned as the German advocates of the excision theory could be mistaken in their diagnosis in such a large percentage of cases, I can not affirm. It seems improbable, yet it is more improbable that success should follow an excision practised upon a chancre several days old, with the inguinal glands already involved, as has been alleged, and that failure should occur in cases like those I have narrated.

## WHEN DOES SYPHILIS BECOME CONSTITUTIONAL?

By DR. ERIK PONTOPPIDAN, of Copenhagen.

From the *Medical Bulletin*, May, 1885:—The solution of the question at which epoch syphilis has invaded the whole organism and from a local lesion has become a constitutional disease, has of late won a more actual and particular interest, since the treatment of the induration by excision has been proposed, and, by several, rather extensively carried out. This treatment must, to anybody believing in the purely local nature of the initial sclerosis, occur as theoretically well-founded, while those who consider the induration as the first symptom of an already universal disease, *a priori* must be against the excision as being of no use.

These two theories are in fact standing against each other as hard as ever up to this day. I avoid on purpose the expressions "Unicists" and "Dualists," although they are commonly used, because in this question their use is not logical. The thing is, that we have to do with two essentially different conclusions based on essentially different proofs, and facts. The main proof for or against the acceptance of two species of virus lies, as by any other decision on species, in the natural history of the propagation; if soft sores always propagate as soft sores, and syphilitic chancre always gives syphilis, we have two distinct kinds of disease; if one may develop into the other, if soft sores can propagate as syphilis and *vice versa*, they are only variations of one virus. But this is quite a different question from that which here is to be considered, namely, how the syphilitic initial sclerosis is to be accepted and valued in the series of symptoms, as a still purely local or as a constitutional affection.

Now the results of the chancre excisions have been set forth as giving at last a practical solution of this vexed question. But the sober truth is, that as the results of the excisions up to now are: the greater part followed by syphilis and a smaller part not, is it possible to use them as proofs with just as good or better, with just as bad right in the one way and the other? The cases where syphilis has not followed after the excision, are, up to the present time, so proportionately few that they are able to exclude the possibility that an outbreak perhaps also otherwise would have stayed out, either on account of the uncertainty of diagnosis, or because some cases of undoubted induration remain local without later general symptoms ever being observed.

In order to find proofs for the significance of the sclerosis as an indication or not of universal infection, it is necessary to return to the good old experiment of inoculation: Inoculation from a syphilitic induration to a non-syphilitic individual gives induration and syphilis; inoculation from an induration to an individual constitutionally syphilitic has a negative result; inoculation from an induration to the possessor also has a negative result: *ergo*, is this individual already constitutionally syphilitic?

This conclusion, seemingly of such superior validity, nevertheless has some rather weak points. Even if we provisionally accept the premises as just, it is easy to see that in reality nothing is proved from the very moment of the inoculation. But at all events only for this point of time, plus the incubation time for the eventual induration number two, or, in other words, that imperceptible process which takes place during the first weeks after the inoculation and which is called the first incubation, might possibly go on regularly like in any other non-syphilitic organism; but when the organism at the time, when the more pronounced proliferation, the induration, were to take place, at last has been universally impregnated with the virus, the induration number two does not any more find a virginal soil to develop in—we get a negative result.

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 IODOFORM IN SYPHILIS.

DR. OTTO W. FENNEL, in a letter to the *Cincinnati Lancet and Clinic*, speaks of the use of iodoform in the treatment of syphilis and venereal affections as he saw it in Prof. Neumann's clinic in Vienna.

In 1870, Bozzi introduced the hypodermic iodoform treatment of syphilis, and soon after experiments thereof were made in our clinic, the injections at

first, contained of iodoform 1 to 20 of ol. oliv. which proved to be too small a portion of the drug for each injection, and thus were followed by the following solution: Iodoform, 1; olei ricini, 15; 1: ether, 6; 1: ether and ol. olivas, 22 5, and finally suspensions of 6:20 glycerine.

These injections were made both in animals and persons, and from careful observation it was learnt that of the ethereal solution 4 centigrams, were absorbed by both, while of the suspensions, the animal system took up 2 centigrams, and that of man 4 centigrams of iodoform daily. The light form (maculo-papular) of the stage of eruption disappeared rapidly after from 20 to 30 injections while the popular and especially pustular varieties offered greater resistance likewise to this method of treatment, and required a larger number of injections. The pains due to syphilitic periostitis were completely arrested in all cases after from one or two injections. Of all cases treated by this method but two presented recurrences, both these exhibited before treatment was begun macular exanthemata and papular on the genitalia, both disappearing after respectively, 19 and 25 injections and the recurrence consisted of scaling papulæ which vanished readily after but few injections. Like iodine, iodoform is of the greatest value in the late forms of syphilis.

Of much greater importance, however, is this remedy in the treatment of buboes, and here it is a most powerful aid of cure. We must differentiate several stages of the diseased lymphatic glands, which must be treated respectively by iodoform in various vehicles. If there be present a proportionate small destruction of the gland tissue, the remainder of the gland intact, and only a small point of fluctuation, then it was sufficient to puncture, and after draining off the pus to introduce either iodoform-gauze or bougies, (iodoform puri 1, 0, gelatin qu. s. ut. f. bacilli longitudin 5, c. m, crasitudin 5. 0. m, m No. X).

With a few exceptional cases these were all cured in a week, and it was only necessary to occasionally brush the readily bleeding granulations with an astringent to promote healing.

But whenever the suppuration in a gland was at all extensive, and the skin overlying it still intact then the cover of abscess was split lengthwise, and after draining off pus the cavity was filled with iodoform gauze; again when the skin was thinned, reddened and livid, it was removed by means of the scissors, if the gland underneath it was hypertrophied it was taken away either by means of the elastic ligature or sharp spoon, and then iodoform gauze likewise added materially to the rapidity of the granulation formation; the bleeding, dark red, spongy granulation that showed no tendency to cicatrize were penciled with astringents to promote scabbing.

The action of iodoform injection into indolent lymphatic glands were also marked, as they either caused a rapid decrease of the volume of the gland, and that in from two to four days or they produced suppuration, and the puncture of the skin then allowed the pus to flow off and the cavity closed in a few days. After an injection into superficial, enlarged glands, over which the skin had already sloughed, a marked decrease in size could be observed. In circumcision, for both venereal and indurated sores, the gauze was found to be a very beneficial bandage. We use it in venereal sores, ulcerated chancres, papular and serpiginous ulcers locally, and here it is especially the iodoform spray (1:6 ether sulph.) by means of which it is brought in contact with the surface of the sore minutely divided, so that in one case after three spray applications eight chancroids of pea-size, with characteristic fatty base were healed, and that in four days.

We have never seen any dangerous effects of iodoform, no matter in what form it was employed.

#### PERSISTENT HEADACHE IN EARLY SYPHILIS.

By LE GRAND, N. DENSLOW, M.D., St. Paul, Minn., Prof. of Diseases of the Skin, in the Minnesota Coll. Hosp.

From the *Northwestern Lancet*.—The headache referred to includes only that variety occurring early in the secondary stage, say within six months



after the appearance of the chancre. It usually commences with a sense of discomfort, then dull pain, and finally an excruciating pain over the whole top of the head from eyebrow to occiput; one patient describing the feeling as though the entire head was "being compressed in iron bands." Its one important diagnostic feature is nocturnal exacerbation; entire relief may be had from early morning until six or eight o'clock in the evening, when the paroxysm again begins, lasting from two to four hours and perhaps until daylight. Occasionally slight pains remain during the day, but this is exceptional.

The course of the headache is always chronic, continuing frequently for weeks or months if without appropriate treatment. It is always indicative of grave cerebral structural changes, as well as a particularly pernicious type of syphilitic disease. It is as a rule accompanied by other well marked lesions, together with cachexia and emaciation, although occasionally there is apparent good health.

The early recognition of the importance of this symptom, and the institution of appropriate treatment, is necessary to avoid still graver lesions manifesting themselves by aphasia, hemiplegia, paraplegia, various mental disorders and insanity. In the treatment of this condition the patient should be put under the influence of mercury as rapid as possible, its controlling power being in these cases simply wonderful, as is well illustrated by the following cases.

Dr. Denslow gives the history of four cases and then says:—These cases demonstrate very forcibly the truth of the statement already made, that persistent headache in early syphilis is a symptom indicative of a severe type of the disease, and of grave nerve lesions; also, the power of small doses of mercury to control the headache, and the necessity of an early recognition of this fact. It will be noted that in all the cases just related other and pronounced symptoms accompanied this headache.

#### THE BACILLI OF SYPHILIS.

From the *Medical News*, May 2, 1885:—At the recent Kongress für Innere Medecin, held at Wiesbaden, Lustgarten, the clinical assistant of Kaposi, describes a new microphyte, which, by the aid of a novel process of coloring, he had constantly found in the primary, secondary, and tertiary lesions of syphilis, and which he regards as the cause of that disease.

The bacilli are short, straight, or curved rods, with irregular, undulating, and slightly notched contours, of a deep blue color, and contain from two to four spores. They are never free, but are invariably included in wandering cells, in groups of from two to nine. The cells themselves are rarely found at the centre of the infiltration, but exist in pretty large numbers at its edges, and in the adjacent apparently healthy tissues. Lustgarten has also demonstrated the presence of these bacilli in the spinous cells of the rete Malpighi in papular eruptions, through which he explains the clinical fact that moist papules become contagious when they are deprived of their epithelial investment.

#### AFFECTIONS OF THE EYE.

##### CHRONIC DACRYO-CYSTITIS.

By THOMAS A. JOYE, M.D., Asst. Surg. to the Brooklyn Eye and Ear Hospital.

From the *N. Y. Med. Jour.*, May 16, 1885:—In the normal condition the amount of fluid secreted from the lachrymal passages is very small, but under irritating influences it is liable to be not only increased in quantity, but greatly changed in character. The important factors which conspire to bring about a condition of chronic dacryo-cystitis are swelling and hypertrophy of the mucous membrane, a lessening of the caliber of the nasal duct, and a secretion of inflammatory products of a thick, tenacious character, which are

retained and consequently cause distension of the sac, and ultimately erosion of the lachrymal bone. From the fact that in these cases there are, as a rule, swelling and stenosis of the nasal duct, the conclusion is easily arrived at that the fundamental principle in the treatment is dilatation. Hence it is we are taught that any treatment to be effective must be that which will enlarge the passage-way to the nose, thus giving exit to the pent-up secretions in the lachrymal sac. The remedies most recommended are the slitting up of the lower canaliculus and the subsequent passing of probes into the nasal duct. Various methods of dilatation have been practiced from time to time with varying success.

A correct appreciation of the conditions which aid in producing and continuing this disease is necessary for its successful treatment. The most important is the palpebral conjunctivitis, which is always present. It is well known that atmospheric conditions, which excite an excessive secretion of tears in the normal eye, invariably cause an aggravation of the symptoms. Appropriate treatment here will materially aid in the improvement by arresting the over-secretion from the lachrymal gland, and consequently lessening the contents of the lachrymal sac. During the last year I have successfully treated three cases of this disease where the ordinary methods had failed. The first was cured by instilling a solution of sulphate of atropine into the conjunctival sac; the two succeeding ones, by injecting this agent directly into the lachrymal sac. My attention was accidentally called to the effect of atropine in cases of chronic dacryo-cystitis while treating a case of ulcer of the cornea in the person of a patient who had chronic dacryo-cystitis on the same side. Treatment applied to the lachrymal sac with difficulty by myself and others had proved ineffectual, and was abandoned as useless. In treating him at a later time for ulcer of the cornea, a solution of atropine was employed. After a few days, improvement of the lachrymal disease was noticed, which continued until a cure was effected.

While the cases reported give promise of further success in the treatment of this disease, the number is too small to warrant definite conclusions. The fact that the ordinary methods were fairly tried, and failed to effect a cure, makes it probable that atropine will at least be of benefit. The physiological effects of atropine are well known. The dryness of the skin, throat, and larynx, produced by its use, has been demonstrated clinically. The hectic sweats of phthisis, those of articular rheumatism, and profuse suppuration are more or less relieved by its administration. Local and unilateral sweats have been controlled by its topical application. Its efficiency as a remedy in the treatment of galactorrhœa is well known. The beneficial effects observed from its use in sialorrhœa and leucorrhœa make it probable that the experience observed in the cases reported will be borne out. The single objection to its use is that it seems impossible to apply it without causing dilatation of the pupil.

#### ASTHENOPIA.

By J. W. THOMPSON, M.D., St. Paul, Minn.

From the *Northwestern Lancet*, March 1, 1885:—The term Asthenopia literally signifies a weakness of the eye. It is a condition of vision originating usually in hypermetropia, and dependent on a debility of the muscular apparatus by which the eye is adjusted for the vision of near objects. When it exists in a high degree, vision for distant objects even, is painful. Asthenopia, therefore, is not a distinct disease of the eye, but rather a symptom, which may point to various diseased conditions. There are two forms of Asthenopia recognized, accommodative and muscular. The muscular variety is due to an insufficiency of the *rectus internus* muscle and usually occurs in myopia. The near point of distinct vision is so near the eye that the degree of convergence necessary to maintain binocular vision tires the internal rectus muscle. In order to determine whether the asthenopia is caused by an insufficiency of the internal rectus, take a pencil, or any similar object, hold it in the vertical position, directly in front of the patient and about twelve or fourteen inches distant from his eyes, and request him to

regard it steadily while you move it slowly toward him. It will be seen that when five or six inches distant from him, one eye will begin to waver and then suddenly turn out. When this takes place it is very safe to conclude that there is muscular asthenopia. It may be remarked that the eye that turns out is the more myopic of the two, when there is a difference of the degrees of myopia existing between them.

Of the two general forms of asthenopia the accommodative is the one more frequently met with, and the one that gives the greater amount of trouble. By way of illustration allow me to present a typical case.

An individual who has never experienced any inconvenience worthy of mention with his eyes, notwithstanding he has for a number of years employed them almost constantly for near work—take for example the tailor—he observes during the last day's work of the week toward evening, that suddenly, in a very unusual manner, the stitches become indistinct, the point of the needle appears double and even the sewing seems to swim. For the moment he finds that a continuation of his work is impossible; he imagines his eyes are full of water; he closes them momentarily, rubs them with the back of his hand, looks away from his work a few minutes, and then resumes it again and continues to the end of the day without any further disturbance.

After resting Sunday he goes actively to work again Monday morning. He has at length forgotten the little episode which occurred in the previous week. But the warning does not remain away. The last day of the week comes and brings with it the same phenomenon—at an early hour, however, than the previous Saturday. He employs the same means, viz.: of rubbing his eyes and resting them for a short time. This took place perhaps an hour earlier than it did the week before. On this occasion a longer time is required to place his eyes in a condition to enable him to resume his work. Finally he is unable to read a few lines. The first words of the line may appear sharp and clear, but ere he has finished it he is overtaken with a painful feeling in and around the eyes, the letters become gray and indistinct, the lines run together and the page seems like a confused mass of gray streaks, and further reading has become quite impossible.

The remedy consists in the use of properly adjusted glasses.

### AN EPIDEMIC OF ACUTE CATARRHAL CONJUNCTIVITIS—"PINK EYE."

By H. F. HANSELL, M.D., Ophthalmic and Aural Surg. to Southwestern Hosp., Philadelphia.

From the *Med. News*, May 16, 1885:—Within the past few weeks so many cases of acute inflammation of the conjunctiva have occurred in Philadelphia and surrounding country, as well as in several other Eastern cities, as to warrant the use of the term epidemic. Some have presented the features of the ordinary non-epidemic catarrhal inflammation, while others, on account of the violence of the inflammation, have had the appearance of Egyptian (purulent) ophthalmia, and seemed bordering on it. Baemisch thus defines conjunctivitis catarrhalis (simplex) "in general a condition of abnormally diffuse hyperæmia of the membrane attended with increased mucous secretion." It is a more or less active exudative inflammation, developing suddenly, and frequently, without assignable cause, reaching its acme in twenty-four or thirty-six hours, receding nearly as rapidly, entirely disappearing in three or four days, and leaving no trace.

The recognition of this disease is not difficult. The inflammations most resembling it, and with which it is most apt to be confounded, are scleritis, episcleritis, and iritis; but, if its prominent symptoms are remembered—bright red conjunctival injection—involving the entire membrane, greatest on the lids and gradually growing fainter toward the cornea; the mucous discharge collected in flakes in the folds, the adherence of the eyelids to one another in the morning; the history—epidemic—its sudden appearance, rapid development, and almost entire absence of pain, its disappearance in a few days under the simplest treatment; and its binocular character, the

affection attacking the second eye within a few hours of the first—and these signs are seen in every case—mistaken diagnosis must be a rare occurrence.

The prognosis is always favorable. No serious complication is apt to arise.

The treatment is entirely local and of the mildest character. A weak astringent wash, such as borax, gr. v, and  $\frac{3}{4}$  ss each of camphor water and pure water, or the same strength alum solution, used freely and frequently on a soft, clean sponge to the closed lids, and the application at night of Pagenstecher's ointment—hydrarg. ox. flav., grs. 3 j—or simple cerate will be proper for the majority of cases. If the inflammation shows a tendency to become chronic, touching the averted lid daily or every second day with silver nitrate, gr. ij—3 j, will speedily effect a cure.

To prevent the spread of the disease all cloths, sponges, etc., used to cleanse an affected eye should be destroyed or thoroughly washed in a disinfectant solution. Precautionary measures, however, seem to be of little avail.

### HYSTERICAL AFFECTIONS OF THE EYE.

By GEO. C. HARLAN, M.D., Philadelphia.

From the *Therapeutic Gazette*.—Patients in the psychological condition called hysterical, may not only present almost any symptom of disease without the existence of any lesion to which such symptom could be referred, but sometimes make excursions beyond the limits of classical pathology, and puzzle their doctors by originating symptoms that no possible lesion could explain.

It seems to me that the eye is an exceptionally pregnant seat of such affections, and that their occurrence there has hardly received the attention from neurologists, or perhaps even from ophthalmic surgeons, that might with advantage be given to it.

The lids are subject to both spasm and paresis of an entirely hysterical characters.

The subjects of this affliction complain of a great difficulty, sometimes an entire impossibility, of opening the eye on awakening. In some cases this occurs always in the morning, in some even after a nap during the day, and in others only when aroused during the night, when perhaps the consciousness and will power are regained less promptly.

The most common form of this disturbance is insufficiency of the internal recti, which frequently occurs independently of any error of refraction.

Paresis or spasm of the accommodation is not unfrequent in neurotic subjects. The latter occurs usually, though by no means always, in connection with some error of refraction which acts as the exciting cause.

Retinal anaesthesia is a symptom which often occasions great annoyance to ophthalmic surgeons in testing refraction. Its subjects may at one moment have full acuity of vision, while at the next, with the same glass, it is very much diminished. They say that the letters become blurred and fade away after they have looked at them for a few seconds.

I have met with several cases of colored vision—blue streaks, yellowish fogs, etc., of transitory character and evidently nervous origin.

Unsteadiness, or even apparent constant motion of any object looked at, particularly print, occasionally occurs, and, not admitting of our physiological or optical explanation, may be classified as hysterical.

The most striking symptom, and the one that has naturally excited the most interest, is simulated blindness. For obvious reasons of expediency, this is usually monocular.

When blindness of both eyes is simulated, we are, of course, deprived of any optical means of detecting it. Etherization, as suggested in an article on malingering by Drs. Mitchell, Morehouse and Keen (*American Journal of Medical Sciences*, Oct. 64) might prove successful.

These cases of hysterical blindness offer a curious and most interesting psychological problem. In some there is evidently a more or less deliberate deception, the result of an insane craving for sympathy or personal importance, or the motiveless freak of a disordered mind. Patients of this class

are like the fasting girls who develop the superhuman ingenuity in the effort to make it appear that they live without eating. In the case of others, however, the charge of intentional deception can by no means so easily be maintained.

## AFFECTIONS OF THE EAR.

### CHRONIC SUPPURATION OF THE LEFT MIDDLE EAR.

By J. MORRISON RAY, M.D., Lecturer on Diseases of the Eye and Ear, Spring Course, Univ. of Louisville.

From the *Louisville Med. News*, May 16, 1885:—Dr. Ray gives the clinical history of a case occurring in a girl 20 years of age, and then says:—A point of special interest presented by this case is the consecutive inflammation in the right ear, the left being primarily affected. Satisfactory explanation can be given by considering the inflammation in the right ear as caused by the same conditions which produced inflammation and rupture of the drum-head in the left, namely, naso-pharyngeal catarrh, which was plainly observable in this case.

Reasoning from analogy with the eye in view, the question may be pertinently asked, Can we have a sympathetic otitis? The situation of the ear, the difficulty in studying its pathological condition in disease, and its intimate connection with the throat, must necessarily place in doubt any statement made upon the point in question. The susceptibility of the eye to sympathetic inflammation is well known, and it is a significant fact that the ear is more freely supplied with perves having the same origin as those which transmit sympathetic influence from one eye to the other. It has but recently been demonstrated that neuralgia, and even inflammation in the ear, may be a reflex expression of disease in other parts of the body.

Within the last few years it has been proved that neuralgias of the ear may be produced by the irritation of decayed teeth, and Hilton and Burnett have reported cases of ulceration of the external auditory canal with perforation of the drum membrane that defied all treatment; yet, when a decayed tooth was removed the ulceration began a reparative process at once. Dr. Roosa, in his recent work gives the history of a case of injury to one ear, with diminution of the hearing power in the other, and asks the question, "Why may not a traumatic inflammation of one ear produce a sympathetic plastic inflammation of its fellow?" Urbantschitsch states that undoubted sympathy exists between the two external auditory canals, and that he believes the same may exist between the middle ears. Several instances have been reported where improvement of the hearing distance in one ear took place during the treatment of its fellow.

Every physician is familiar with the occurrence of cough during manipulation of the external auditory canal, and loud shouts in the ear have been known to cause vomiting, involuntary passage of urine, and to set the teeth on edge; a total loss of sight has been noted by Wauscher to follow middle ear disease, which was restored when the ear trouble was relieved.

In conclusion it may be affirmed that if sympathetic ear troubles cannot be positively established through clinical experience, it is certain that peripheral irritation in the ear is the cause of numerous reflex nervous phenomena.

### PERCEPTION OF THE DIRECTION OF SOUNDS.

By G. WALTER BARR, M.D., of Bridgeport, Illinois.

From the *College and Clinical Record*, April 1, 1885:—A person deaf in one ear always tries to walk so that his normal ear will be next his companion; should that companion be deaf in the same ear their desires will

conflict as they start to walk together. Such a person also resorts to little tricks to conceal his defects, which are readily recognized by another similar sensitive imposter. Being myself in this class of unfortunates, I have observed a large, uncounted number of persons deaf in one ear to a greater or less degree, the major part of whom have never consulted a specialist. It may be remarked that the ratio of this class to the total population is surprisingly large, and that the left ear is most often affected. I have never met a person with impaired hearing in one ear who could tell by ear the direction of a sound.

They locate sounds toward their normal ear, or else by the mediation of the reasoning faculty; persons with normal ears, to each ear of whom sounds are conveyed under exactly the same conditions as to the other ear, are experimentally like persons with unilateral deafness, except that they locate sounds in front.

Now, building upon these observed facts, it must be true that the perception of sound direction depends somehow upon the co-relation of the two ears. The facts that the direction of the source has no influence upon pitch or quality, and that persons with one ear may have a very delicate perception of these attributes of sound, exclude them from any relation to the perception of sound direction. But it is observed that persons with unilateral deafness perceive a variation in the loudness of a sound according to its position upon their normal and impaired side. That is to say, persons whose only abnormality of hearing is a variation of intensity in the two ears are those who cannot determine the direction of sounds with the ear. Hence, it follows—bearing in mind the unconscious ratiocination discovered to exist in the experiments above—that the determination of sound direction is a faculty of the mind dependent upon inferences from the variation in intensity of sound perceived by each ear.

#### BORO-GLYCERIDE IN THE TREATMENT OF SUPPURATIVE DISEASES OF THE MIDDLE EAR.

By A. M. ROSEBROUGH, M.D., Toronto.

From the *Canada Lancet*, March, 1885:—Boracic acid and glycerine, when heated, combine to form a new substance, namely, boracic glycerine or boroglyceride. The proportion is according to their atomic weights boracic acid 62 parts, and glycerine 92 parts. They are gently heated over a water bath. The boracic acid is gradually added to the glycerine, and the heat continued until 54 parts, or 3 molecules of water, are driven off. The boroglyceride "on cooling is an amber-colored vitreous mass, which is very friable and easily broken. It is readily soluble in glycerine, but less so in hot or cold water (about 10 per cent.)." "It has an acid, pungent taste, and an astringent effect when applied to mucous membranes."

This new substance or compound is an antiseptic, and if we mistake not is determined to play an important rôle in the antiseptic surgery of the near future.

The use of boracic acid powder is attended with certain drawbacks. (1) Its application is somewhat inconvenient. (2) It retards the free exit of the discharges. (3) In some cases there is a tendency for the powder "to cake," which renders the thorough removal difficult. (4) It fails to completely remove the odor.

Boroglyceride is free from objections. It removes the odor almost immediately, and is so easily applied, that in some cases the application may be entrusted to the patient. With its use I have also succeeded in causing granulation tissue to disappear without resorting to the use of chromic acid or the other caustics. It is used as follows: The ear is carefully syringed with a warm, almost hot, saturated solution of boracic acid. Politzer's air-bag, or the Eustachian catheter is used to force the discharge from the middle ear through the perforation into the external auditory canal. The syringe is again used, and the fundus of the meatus dried with borated cotton, attached to the end of a probe.

### THE PEROXIDE OF HYDROGEN IN EAR AFFECTIONS.

By WILLIAM A. DATTON, Surg. to the Eye, Ear, and Throat Department of the Harlem Dispensary.

From the *N. Y. Med. Jour.*, April 25, 1885:—The difficulty of checking chronic suppurative inflammation of the middle ear in consumptives is well known to all aurists. Without stopping to cite cases, let me say that I have used a twelve-per-cent. solution of the peroxide in the ears of such sufferers, together with the internal administration of a two-per-cent. solution of the same, with most gratifying results.

In ozæna, which is frequently associated with the "tubercular diathesis," sprays of this solution of varying strength have proved more efficacious than any application with which I am acquainted.

Again, in two cases of tubercular laryngitis which I have lately been treating, spraying with a three-per-cent. solution of the peroxide afforded positive relief. The peroxide not only destroys pus, cell-life, etc., but it is, to a certain extent, a local anæsthetic.

A word as to the internal administration of the peroxide. Occasionally patients have complained that even a two-per-cent. dilution induced an irritation in the fauces and pharynx when swallowed, but this unpleasant effect can, I think, be obviated by administering the preparation in milk.

That the peroxide of hydrogen has a future among our most trusted resources in the *materia medica* I have no doubt. It is a potent deodorizer, it is an eligible antiseptic (in [?] and out of the circulation), and it is an effective remedy in a large class of diseases in which mucous-membrane tissue is chiefly involved.

For cleansing purposes it has no equal in any known agent. In operation on mucous membrane where the secretion and hæmorrhage often embarrass the surgeon, the use of a strong solution of the peroxide (twelve per cent.) facilitates progress by decolorizing the blood and by its cleansing, styptic properties.

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### DIPLACUSIS BINAURALIS.

Dr. O. D. POMEROY, of New York, says in the *N. Y. Med. Jour.*, April 18, 1885:—The following case of double hearing with both ears is sufficiently rare to warrant its publication: Father C., a Catholic priest, aged forty, has had a chronic catarrhal otitis media in both ears for about two years. The left is nearly normal at present, but he occasionally has the Eustachian tube obstructed; H. D. R. w.  $\frac{7}{16}$ ; after inflation,  $\frac{1}{16}$ .

At the commencement of the attack, the right ear heard a given note nearly one tone above that of the left; after about a week of treatment (four visits), the faulty note seemed only about a half-tone above its fellow, and, after seven visits, the tone was the same as that of the other ear, except it was somewhat muffled. At the time the right ear heard the note one-fourth of a tone higher, there was a repetition of the first sound, like an echo, which would place this ear, perhaps, in the category of diplacusis monauralis.

On the last observation, with the hearing of the right nearly reaching ten inches, sounds seemed muffled in this ear, and high tones were heard better than lower. Bone conduction better in the right ear, although when both ears are closed, the tuning-fork is heard better in the left or good ear.

At the time the pseudo-note was a half-tone above, the patient heard only the third and dominant of the chord.

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### TRAUMATIC LESIONS OF THE MEMBRANA TYMPANI.

By GORHAM BACON, M.D., Aural Surgeon, New York Eye and Ear Infirmary.

From the *Medical Record*, April 11, 1885:—Traumatic injuries of the drum-head are usually produced (1) by sudden condensation of the air in the

external auditory canal or cavity of the middle ear; (2) by a fracture of the cranial bones extending to the membrana tympani; or, (3) by the penetration of some foreign body. Occasionally, the rapid rarefaction of the external atmosphere causes a rupture. Most frequently injuries of the membrana tympani occur in individuals who are in the habit of scratching the auditory canal with hair-pins, tooth-picks, etc., and accidentally the instrument is pushed in too far. Other causes are the instillation of strong solutions into the canal, boxing the ears, diving, striking of the waves against the ear while bathing, blows, discharge of cannon, gunshot wounds, kick on the mastoid process, and hanging. Frequently the drum-head is ruptured during attacks of violent sneezing and in whooping-cough.

In most all of the cases of rupture of the membrana tympani due to the sudden condensation or rarefaction of air or from blows, falls, etc., an examination of the ears will show a catarrhal condition of the middle ear with more or less obstruction to the entrance of air through the Eustachian tube or some calcareous deposit or other change in the membrana tympani itself.

## AFFECTIONS OF THE SKIN.

### SCABIES, PRURITUS, AND ECZEMA.

By JAMES NEVINS HYDE, M.D., Prof. of Skin and Venereal Diseases, Rush Med. Coll., Chicago, Ill.

From the *Chicago Med. Jour. and Examiner*, March, 1885:—No man is so good a diagnostician as he who understands the exceptions to the rule. It will not be out of place to look for a moment into the features by which scabies is to be differentiated from pruritus and the eczemas.

They are all, indeed, surprisingly alike. The reason for this resemblance is clear. In all, the skin is greatly irritated; in the one case, by cold air; in the other, by a parasite attacking the skin. The result is the same, a pruritus differing in degree in different cases, but which may be as severe in one disease as in another. Then follows the scratching, which gives almost the same clinical portrait to each of the affections named. No wonder they resemble each other. No wonder that the physicians in Louisville are reported to be rubbing sulphur salves over their tormented patients. The plates illustrating scabies in Hebra's superb atlas will answer very well indeed for many typical cases of the diseases now prevalent in the Northwestern States.

Naturally, the first point to which we turn in the study of the differential diagnosis of scabies, is its contagiousness. One excellent author describes this disorder as "highly contagious;" and we know that it may be communicated by the shake of the hand. But we must make some reserve here. While scabies may be communicated by hand-shaking, it is rarely so communicated.

Nothing, however, could be more untrustworthy, than the testimony as to the origin of their disease, given by patients who have been subjected to the operation of that cause. They will often describe with astonishing minuteness the occasion of their infection, and the particular individual from whom they contracted their disease. In this way, the joint occupancy of a bed with a friend or a stranger; the apartment of a hotel in which they have been guests; the wearing of garments loaned them by their friends; and even more casual accidents of personal contact, are urged as the mode by which their disease was transmitted to them.

Looking, next, closely to the eruptive phenomena in scabies, it is needless to say that the burrow made by the female acarus as she penetrates the epidermis, is regarded as a pathognomonic symptom. But it should not be forgotten that the burrow may be wanting, or not discovered.

It is important to know that this parasite may be recognized by the unaided human eye; and its characteristic tortoise-like body exhibits most of its



anatomical peculiarities under a glass enlarging the figure but one hundred diameters. It is not, therefore, a "microscopic animalcule, totally invisible to the eye," which is often claimed to be the cause of the disorders forming the theme of this paper, but is an object that was recognized by man before he ever looked through the first microscope. In the last century even, "old women" obtained a reputation for the discovery and extraction of the itch-mite from the human skin.

Hebra points to the fact that between two parallels, one drawn through the nipples, and another at a short distance above the knees, on the anterior face of the body, can be recognized the greater part of the eruptive lesions in every case of scabies, where the skin has been well scratched. He adds that pustules of the buttocks are almost conclusive evidences of the presence of the acarus in cobblers and workmen who sit at their trade; that pustules on the fingers and toes, and of the hands and feet, especially in children, are almost equally conclusive evidences of the malady; and that other regions pressed upon by clothing, such as those touched by trusses, pads, corsets, etc., are places where the parasite multiplies freely.

There is a class of patients believe that the maladies of the skin here discussed are due to "impurities of the blood." This is an old doctrine. It dates from the period of the "melancholic juices" of Galen, and suggests that aphorism of Hippocrates, in which it is declared that "when furfuraceous particles are discharged along with the thick urine, there is scabies of the bladder." It runs like a blood-red strand through almost every cord used since in medicine, wherewith to tie up a bundle of errors. Even the itch did not escape this misfortune, after it had been demonstrably produced by the presence of acari. The internal remedies that have been administered for relief of the itch no man can number. Unfortunately, the "blood purifying" remedies employed in the winter diseases of the skin almost invariably aggravate the latter. The worst phases of these maladies are those in which the salts of potash, mercury, and arsenic have been pushed to the fullest extent, in the vain hope of thus securing relief.

The therapeutic problem presented is this: first, to allay the irritability of the skin; second, to relieve the eruptive symptoms, whether these be the result of traumatism or of the action upon the skin of the cold air.

#### ABOUT GRAY HAIR.

The heroine of a popular play is made to exclaim that she never considers a man old until he is fat and bald. She was quite right in omitting gray hair as a sign of age. Though it is generally esteemed so, there are too many exceptions on both sides to allow it as an infallible sign.

Many persons begin to show gray hairs while they are yet in their twenties, and some while in their teens. This does not by any means argue a premature decay of the constitution. It is a purely local phenomenon, and may co-exist with unusual bodily vigor. The celebrated author and traveler George Borrow turned quite gray before he was thirty, but was an extraordinary swimmer and athlete at sixty-five.

Many feeble persons, and others who have suffered extremely both mentally and physically do not blanch a hair until past middle life; while others, without assignable cause, lose their capillary coloring matter rapidly when about forty years of age.

Race has a marked influence. The traveler, Dr. Orbigny, says that in the many years he spent in South America he never saw a bald Indian, and scarcely ever a gray-haired one. The negroes turn more slowly than the whites. Yet we know a negress of pure blood, about thirty-five years old, who is quite gray.

In this country, sex appears to make little difference. In men the hair and beard rarely change equally. The one is usually darker than the other for several years; but there seems no general rule as to which whitens first.

The spot where grayness begins differs with the individual. The philosopher, Schopenhauer, began to turn gray on the temples, and complacently framed a theory that this is an indication of vigorous mental activity.

The correlation of gray hair, as well as its causes, deserve more attentive study than they have received. Such a change is undoubtedly indicative of some deep-seated physiological process, but what this is we can only ascertain by a much wider series of observations than have yet been submitted to scientific analysis.—*Med. and Surg. Reporter*.

#### THE EFFECT OF LIGHTNING UPON HUMAN BEINGS.

From an editorial in the *Med. and Surg. Reporter*, May 9, 1885:—Dr. Heusner had the opportunity to study the effect of lightning upon a large number of human beings. He has recorded his experience in the *Wiener Med. Blatter*.

In the neighborhood of Bremen twenty persons had been struck by lightning; four of them were killed outright, and the remaining sixteen were injured more or less. Most of those who recovered, had later no recollection whatever of what had happened to them; some remembered the exact moment, and the sensations which they had experienced at the time. Those of the latter class all spoke of a feeling as if some heavy object had struck their head or the nape of their neck. The skin of all showed irregular burns, from which red lines branched out over the extremities and the trunk, in a manner as the teeth pass off a comb. Of decided interest is the observation, already made, and confirmed by Heusner, that even grave wounds of the skull need be but of relatively small importance to the brain, notwithstanding vomiting in the beginning and utter want of recollection regarding the occurrence, notwithstanding a great debility, which remained for many weeks later, a boy completely recovered who had received a burn in the middle of the forehead, which penetrated through the whole cutis to the bone.

Those struck by lightning evinced a cadaveric hue; the features were distorted, and the extremities showed a surprising coldness. One woman she had about twenty burns, from the size of a pea to that of a ten-cent piece, on the soles of her feet, besides two larger and deeper ones near the head; the former spots evidently resulting from the lightning making its exit through them from the body. The woman was found dead. Whenever there seems to be evidence of the current having passed through, instead of perhaps around the body, the effect of the lightning always appears to be a fatal one.

#### A TOPICAL APPLICATION AGAINST CORNS.

P. VIGIER, (*France Medicale*):—R Salicylic acid, 1 gramme; alcoholic extr. of carabis indica, 0 grm. 50; alcohol (90 degrees), 1 grm.; ether (62 degrees), 2 grm. 50; elastic collodion, 5 grm. M. and put in well corked bottle. Apply with a brush or a match 3 times a day for about a week, when the whole corn can be easily wiped off.—*St. Louis Med. and Surg. Jour.*

#### ECZEMA OF THE HANDS, (CHAPPED HANDS).

VAN HARLINGEN:—R Oxyde of bismuth, 4 grm.; oleic acid, 80 grm.; white wax, 12 grm.; vaseline, 86 grm.; oil of roses, 2 drops. M. S. Apply 8 times a day.—(*Ibid*).

# MIDWIFERY,

## AND THE DISEASES OF WOMEN AND CHILDREN.

### EXTRA UTERINE PREGNANCY.

By WILLIAM R. D. BLACKWOOD, M.D., Neurologist and Electrician to the Presbyterian Hospital, Philadelphia.

From the *Medical Bulletin*, May, 1885.—Extra-uterine pregnancy is of unusual interest to the general practitioner into whose care at any time a case may fall. After introductory remarks and preliminary items in the history of the case we note the following essential features:—She menstruated normally in the first week of January, 1884. The uterus was four inches in depth, patulous, and was well swabbed internally and painted over the cervix externally during treatment. Pregnancy occurred on the 8th of January, and this is *positive*, intercourse not having occurred for a month previously and never since that date. She menstruated as usual in December and in the anterior months of 1883. The intra-uterine treatment was resumed on the 15th of January but the electricity was suspended, condensation being now well secured. Pregnancy was, of course, neither known or suspected until later. Early in February severe abdominal pains, presumed to be neuralgic were inaugurated and treated by morphia. These were diffused at first, but later they were discovered to be uterine, and the local applications were discontinued as being possibly the cause of uterine colic, the Fallopian tubes on either side being over-dilated perceptibly. Since menstruation ten thorough applications of the mixture had been made, *and the uterus, I know, beyond question, was empty.* To my utter surprise, and more, to my horror! morning nausea, mammary pains and engorgement evidenced pregnancy, and the usual signs confirming the fact had been evident to the patient unknown to me. By the 1st of March the lady several times felt, above the right groin a globular mass the size of a large walnut. The mass was movable in any plane, not at all tender, and it was undeniably a tubal pregnancy. I had again employed electricity freely during this period, though not definitely, in the absence of any sign accurately locating the embryo, but now galvanism and induction currents were brought to bear directly upon the mass, and I carried these far beyond anything yet recorded in such cases. Before ceasing my efforts I carried the current up to fifty-nine volts.

By the middle of April the fœtus was almost in the median line, but the womb was yet empty and crowded toward the left. I could still introduce my hand edgewise between the two masses. Hypogastric pains recurred now with terrible severity, and motion was clearly apparent in the tumor. At the end of April the fœtus had entered the uterine cavity proper, and the internal os now closed, it having hitherto been patulous under repeated gentle examinations with the sound. So far all was well, but now came a difficulty, the outcome of which I could not foresee. We were safe as to the relief from an extra-uterine foetation, but the galvanism had almost literally destroyed the abdominal muscular walls, the fat was totally absorbed, and the uterus was thinner than any which I have ever seen—it was about as thick as two or three layers of blotting-paper only! The thinning progressed until it seemed as though the womb must rupture, from the growth of the child.

During the latter weeks of pregnancy a better development of the muscles was observed. Labor did not occur until the middle of December, *fully six weeks beyond term*, but the act was in every way normal, short and easy. The child weighed ten pounds lacking one ounce, and did well. Convalescence was good.

The points of interest are: First, Was the foetation extra-uterine? To this I answer unhesitatingly *yes!* I repeatedly explored the uterus with a long sound up to the fundus, and turned the point of a slimmer instrument into both Fallopian tubes, for half an inch on the left and an inch easily on the right. This was done when the rational signs of pregnancy were evident and after I could grasp the embryo as a mass whilst in the tube and distant from the womb fully four inches. I watched the development of the tumor and its transit to the uterus daily, and with extreme interest and care, till it reached its normal home. About the beginning of the third month I felt the dilatation of the right cornua and cannot be mistaken about the facts thus observed. An extra-uterine foetation being destroyed by electricity and followed by a normal pregnancy was impossible. No sexual intercourse was attempted after January 8th. This is strictly true, I know. The whole matter to me is clear, although I admit its apparent impossibility and do not know of anything approaching the case in its peculiar details.

Why did the battery not destroy the embryo? To this I plead ignorance—I do not know. I do know that every effort was made to obtain full effect; the current strength was enormously in excess of that known to be effective in such cases; the battery was in excellent condition; and the electro-motive force was measured by accurate tests.

How did the duration extend beyond a normal term? Here, again, I am at a loss to answer. *It did*, that I know. I believe that development was *delayed* by the galvanism, at least during the first seven months, and this may have been a factor in the case, although the child grew rapidly toward the close of term. Cases of prolonged gestation are not rare; they undoubtedly occur, and in my case there is no doubt as to the extension of fully six weeks beyond the usual term. When the child reached the outer world it was mature, extraordinarily developed, and at a month old it was taken for a three months' infant by all its numerous friends.

The legal point always involved in protracted gestation is of course applicable, and would press with special force in a case like this were property involved, but no interest of the child should suffer, it seems to me, if born in lawful wedlock, whilst both parents are living at its birth.

#### THE INFLUENCE OF BLACK COHOSH IN PARTURITION.

The *Northwestern Lancet*, May 1, 1885, gives the results of Dr. Knox's clinical observations concerning the action of black cohosh in one hundred and sixty cases of labor, 57 primip. and 93 multip. reported to the Chicago Gyn. Soc.

1. Cimicifuga has a positive sedative effect upon the parturient woman, quieting reflex irritability, nausea, pruritis, and insomnia, so common in the last six weeks of pregnancy; it always renders them less distressing, and they often disappear under its administration.

2. Cimicifuga has a positive antispasmodic effect upon the parturient woman. The neuralgic cramps and irregular pains of the first stage of labor are ameliorated, and often altogether abolished. In fact during the first indiscriminate use of the drug in all cases, I had the mortification with a few women of terminating the labor so precipitately, and without prodromic symptoms, as to be unable to reach the bedside before birth.

3. Cimicifuga relaxes uterine muscular fibre, and the soft parts of the parturient canal, by controlling muscular irritability, thus facilitating labor and diminishing risks of laceration.

4. Cimicifuga increases the energy and rhythm of the pains in the second stage of labor.

5. It is my belief that cimicifuga, like ergot, maintains a better contraction of the uterus after delivery.

It is his habit, however, to administer fifteen to thirty minims of the fluid extract of ergot after the birth of the fœtal head, and he has had but few opportunities of testing this effect of the cohosh.

His method of administration has been to give fifteen minims of the fluid extract of cimicifuga in compound syrup of sarsaparilla each night for four weeks before the expected confinement.

### OVULATION AND MENSTRUATION CONSIDERED IN THEIR PHYSIOLOGICAL RELATIONS.

By FRANKLIN TOWNSEND, M.D., Albany, N. Y.

From the *Albany Medical Annals*, April 1885:—The purport of the subject of this paper may be thus briefly stated: To comprehend, so far as possible, the intimacy of relation existing between the two important functions of ovulation and menstruation in the human female; and the question which will most occupy our attention is as to the dependence of the latter (menstruation) upon the former (ovulation).

The essential part of the female generative system is that in which the ova, or eggs, are formed; the other organs are merely accessory, and are not even to be found in a large proportion of the animal kingdom.

The origin and development of ovisacs commences very early in life. Indeed, it was clearly demonstrated many years ago that well-developed ovisacs could occasionally be noticed in the matured fœtus. Ritchie, in his work on "Ovarian Physiology and Pathology," clearly proves the existence of such ovisacs in the ovaries of the newly born, and speaks of them as being highly vascular and even filled with granular contents.

From the statements just made, then, it would certainly appear that the function of ovulation is performed *before puberty*, and is a valuable argument in support of the view that menstruation and it are wholly distinct and separate processes. To cite another fact which is of no little interest, we are aware that conception frequently takes place when there is no appearance of the catamenial flow, but such a condition would be impossible were ovulation altogether absent.

Another factor, which may be added to those already mentioned as arguments against the view that ovulation and menstruation are in inseparable relation, is that the former function is by no means a *periodic* one, as the latter seems to be. Indeed, from what has been already stated, it would seem that ovulation is liable to be extremely irregular; that is, that ovisacs mature and rupture at odd times and more or less constantly, irrespective of the menstrual flow, which, according to all observers, physiologically and normally usually takes place with the nicest regularity.

Again, it is almost universally stated by most physiologists and students of this particular branch of medical science that with the onset of the menopause *both* ovulation and menstruation cease, and with them the procreative powers of the women, as, no doubt, would be the result were *both* functions to be absolutely suspended. But that this is by no means a necessity may be shown, Ritchie and others having proven that the formation of perfect ova continues, with rupturing of the ovisacs, long after the cessation of the menses. The general atrophy which accompanies senility affects, of course, the ovaries, and later in life they are usually small and shrivelled.

From the above, then, it would certainly seem to the writer that the function of ovulation can be performed without relation to the menstrual nîsus.

The question is whether menstruation can take place without relation to the rupture of ovisacs in the ovary, or ovulation, or without the presence of the ovaries. That the menstrual flow may take place without ovulation is evident from the fact that many instances are recorded where no change has been observed in either ovary in women who have died during the menstrual nîsus.

It would seem to us that a question of this nature can best and *only* be solved after a thoroughly comprehensive idea is gained of what menstruation really means; and when once such a knowledge is attained, we think that the inquiry as to its relation to ovulation may be brought clearly to light.

The author of the paper then quotes the views of a large number of observers with reference to the essential nature of menstruation.

As we have shown that ovulation is not the necessary cause of menstruation, this latter function may be regarded as an incidental rather than an essential one. Considered in itself, it represents merely a flow of blood from the uterus and tubes at stated periods, with fatty degeneration and exfoliation of the mucous membrane, irrespective of its connections or causation.

To summarize briefly, then, we would consider—(1) That ovulation does occur independent of menstruation; (2) That menstruation can occur independent of ovulation; (3) That the flow, after complete extirpation of both ovaries and tubes, is a metrostaxis, and not menstruation, as we now comprehend that term.

### THE UTERINE CIRCULATION.

One of the striking features of modern medicine is the advance in the department of gynecology. Although that branch has never been positively stationary, yet certain moss-grown traditions have crept over it which it is not easy to dislodge. The old ideas of uterine pathology, and above all the theories of displacement, with the time-honored diagrammatic figures that have been copied from one treatise into another for nearly half a century—these have been held with a tenacious grasp. But the last year has seen many changes, and doubtless there is more iconoclasm still to come.

An important paper on the mechanical theory of displacements was recently read, by Dr. John Williams, before the Obstetrical Society of London. In the course of his remarks, as reported in the *Lancet*, he demonstrated clearly that the uterine circulation was so free that any segment of the organ might be constricted without affecting the blood supply to any segments above or below the constricted point. The natural inference was, that simple flexion could not occasion congestion, as was taught by Graily Hewitt. Dr. Hewitt of course opposed this view, citing numerous clinical observations to sustain his theory; but the fact remained that the arguments of his opponent, founded as they were on a sound anatomical basis, were not easy to answer.

We regard this discussion as a highly significant one, not only from its inherent importance, but because it is one of those "straws" that show which way the wind blows. One thing is certain; the gynecology of the future will not be made up of a collection of mere personal theories, but will obtain credence only when its teachings agree with the revelations of the dead-house and the dissecting-room. Our English contemporary pertinently expresses with regard to this matter the hope that the "rising generation will henceforth be fed with facts, and allowed to judge for themselves."—*Ed. N. Y. Med. Jour.*, May 9, 1885.

### HOW SOON AFTER EXPOSURE TO SEPSIS MAY THE ACCOUCHEUR RESUME PRACTICE?

By GEORGE F. FRENCH, M.D., Minneapolis, Minn.

Abstract of a paper read before the *Section in Obs. Amer. Med. Ass'n*, April 28, 1885:—He addressed, in October last, letters of inquiry to some of the most distinguished medical men in this country and in Europe. "How soon after exposure to sepsis, may the accoucheur safely resume practice? My purpose is to controvert the opinion which obtains in the profession, that time is an essential element in the cleansing process. I have had an experience which emboldens me to make abdominal section on the day following exposure. I greatly desire to know whether your own experience warrants me in pursuing such a course."

In reply, Thornton, Savage, and Hegar write that they believe time is essential—to be accompanied, of course, with careful cleansing. While Emmet, Battey, Marcy, Goodell, and Thomas in our own country, with Martin, Schroeder, Nussbaum, Volkmann, and Esmarch in Europe, write that

they believe time to be entirely non-essential, and that thorough disinfection can be at once accomplished. The present weight of evidence goes to show that the materies morbi of contagion is a non-gaseous particle, capable of being acted upon and demonstrably susceptible of destruction. Experiments show that the resting spores of the bacilli, the most difficult to destroy of all forms of life, can be killed by a corrosive sublimate solution 1:5000.

Fermentation and putrefaction occur only when the specific germ lives—and filth undergoing fermentative change is most conducive to the spread of infectious diseases. Particles of contagia most frequently find lodgement on our hands and particularly under the finger-nails. It is always possible after the ordinary use of a nail-brush or knife, to remove particles of dirt in which the microscope reveals living germs of possible infection. On this account he cuts his nails short and swab under them with a blunt instrument covered with cloth and wet with some disinfecting liquid. He formerly used for this purpose 5 per cent. carbolic acid, but this made the flesh crack—so he now uses instead corrosive sublimate solution 1:2000. For hang-nails, cracks, and abrasions he uses collodion.

All instruments are kept scrupulously clean as well as disinfected, and the nurse is regarded as one of the instruments. The June number of the *Centralblatt für Chirurgie*, of 1880, contains a most impressive contribution to this subject by Volkmann. In his letter to me, dated Halle, Dec. 5, 1884, he says: "I hold the same views to-day as at that time. A surgeon who disinfects himself well, can, immediately after making a post-mortem, undertake any operation known to surgery. Every morning from six to eight during the summer I am obliged to give the students operations on the cadaver; and from ten to three I am busy in the hospital, operating, and dressing wounds. I have never yet infected a patient. In the winter I have no operations on the cadaver. Comparing my results in the clinic, I can assure you that the mortality in summer is not greater than in winter."

The following characteristic letter, received from Prof. Esmarch, epitomizes the subject under discussion:—"If you have thoroughly disinfected yourself, you can immediately enter upon obstetric practice. Time does not destroy septic dirt."

#### THE DOUCHE IN OBSTETRIC PRACTICE.—CLEANLINESS VS. CONSERVATISM.

From an editorial in the *Weekly Medical Review*, May 2, 1885:—A great stride forward in obstetric practice which has of late been made consists in the use of the vaginal and intra-uterine douche in puerperal women. A great blessing, indeed. Not only a safeguard to prevent the possibility of infection, but a wonderful comfort to the patient, and, if properly given of a sufficient temperature, an aid to involution. As the progressive physician makes this innovation in his obstetric practice, a hue and cry is raised of needless annoyance, of dangerous interference. The intra-uterine injection must certainly be limited in its application, given with care, and under the proper conditions only, but it is a most valuable and effective method of treatment, which must be confined to its proper sphere. Of this we have nothing to say, but the antiseptic vaginal douche is agreeable and very beneficial. We do not wonder that opposition is made, but we are astonished to have such opposition coming from Boston, the great centre of progress.

Dr. Z. B. Adams, in the *Boston Med. and Surg. Jour.*, relates a striking case, and says:—The nurse, I understand, admits that she used more force than she intended to use. The doctor, a woman, blames the nurse. This is ungenerous and irrational. The danger inheres in the practice itself.

"It is doubtless true that death is exceedingly rare from this practice. But we do not hesitate to reject chloroform as an anesthetic on no better ground than this. So much for the danger.

"I would thus sum up my objections to the septic douche in midwifery. It is artificial, it is meddlesome; it is of doubtful utility, and it may be hurtful and even fatal."

We should not have referred to the subject had it not come from such a source. It is, indeed, artificial, so is it meddling. All that the physician does is artificial and is an interference with nature; but a most beneficial one. It may save the patient from that dread puerperal fever; it may save her from death. It is so agreeable to every cleanly woman, that no lady who has once passed through a puerperium with the douche would go through another without it. They are so much cleaner, so much more comfortable, and, moreover, the lochia is diminished. The room, bedding, and the patient are clean. We no longer recognize the odor of the puerperal room.

But our Boston doctor says: "It may be hurtful and even fatal." Aye, everything that is beneficial may be hurtful, and I may add, the more beneficial it is, the more hurtful it may prove, the more judiciously it must be used. Even so simple a remedy as the vaginal douche is itself dangerous. Years ago we called attention most earnestly to these dangers, but for that reason it should not be discarded. It should be used more judiciously."

To obviate these dangers the patient should be careful:—(1) To take the injection in the recumbent position, the hips rather higher than the head, the knees drawn up. (2) The nozzle of the syringe must not be permitted to touch the cervix; hence it must not be introduced over an inch and a half to two inches into the vagina (the position assumed allows the water to flow back and thoroughly fill and distend the vagina.) (3) A strong current must never be used, whether bulb or fountain syringe is used.

The vaginal injection in and out of the puerperium is so frequently used that the physician should bear it in mind and should caution his patients in the puerperium of the dangers arising from the use of the douche as perhaps somewhat more than in the non-puerperal uterus. It is cleanly and agreeable to the patient; lessens the discharge and does away with the disagreeable odor; moreover, it hastens involution, if used at a proper temperature. In the early days of the puerperium antiseptics should be added; the bichloride, one to two thousand, is preferable, having no odor as carbolic acid, and not staining the bed like permanganate of potash: preferable to listerine, as it is inexpensive.

#### HOW AND WHEN TO DELIVER THE PLACENTA.

By H. B. RITTER, M.D., Adjunct Prof. of Obs. and Gyn. in the Louisville Med. Coll.

From the *Medical Herald*, March, 1885:—There is no subject in obstetrics on which more has been written than on the delivery of the placenta, and none, perhaps, on which there is less unity of opinion. This diversity on a subject so practical, one that we witness so frequently, and of which the physiology is so well understood, is hardly to be accounted for, but we will treat the subject as it appears to us from a physiological and practical study.

To begin with, we believe that the third stage of labor should be treated on the same general principles as the first and second stages. We say this because normally the action of the uterus is the same in the third stage as in the first and second, and also because the departure from the normal action of the uterus are alike in the three stages.

In natural cases, to co-operate with nature, we should not interfere during the first fifteen or twenty minutes after the birth of the child. This is a period of repose, during which we should expect nothing but a firm and regular tonic contraction of the uterus. It is our duty, however, to assure ourselves that this natural contraction exists, by now and then grasping the uterus through the abdominal wall, but make no friction, nor knead it unless the tonic contraction is deficient. If with the want of tonic contraction found at this time there is hemorrhage the indications are to deliver the placenta at once by introducing the hand into the uterus, if kneading and pressing on the fundus have failed.

If the spasmodic contractions come on in fifteen or twenty minutes and are sufficiently strong, we follow the same course as with similar pains in either of the preceding stages. Let them alone, but place the hand over the uterus to keep us informed. It happens, frequently, however, that these pains are



too feeble, and then we are called upon to assist. Here pressure with the palm of the hand on the fundus, and in a direction downward and backward will increase the contraction to a natural one and express the placenta, and this is the proper treatment. Again, when the spasmodic contractions fail to come on in the usual time, this pressure should be made at intervals to imitate nature and supply that element which is missing. In irregular contraction of the uterus when not attended with hemorrhage, speedy delivery is not indicated. The placenta will often come away, and the forcing of the hand through the constriction be avoided. In these cases we believe it sufficient time to act when hemorrhage once begins, or some other indication for delivery manifests itself.

There is a time in all cases when, if the placenta is retained, it should be removed. But as we cannot say to deliver with forceps if the child is not born in so many hours, so in the third stage there is no fixed time for delivering the placenta. Like the first and second stages, it should not be allowed to continue too long. It is certainly very exhausting to a woman to be worried by recurring pains and the knowledge that labor is not completed, and she therefore not out of danger. We must therefore take into consideration her general condition as well as the kind and force of uterine contractions to determine when the placenta should be removed. In some cases this will be in fifteen or twenty minutes; in others not until forty or sixty minutes.

When the spasmodic contractions are feeble we adopt this plan. Guard the uterus by means of the hand over the fundus, and when a pain comes on make pressure to assist in the expulsion. When the contractions are strong we are not in favor of their pressure because nature makes all the pressure that is necessary. It will also be noticed that patients generally complain of pressure at such times as being very painful.

#### PHYSIOLOGY AND PATHOLOGY OF THE THIRD STAGE OF LABOR.

From the *Weekly Medical Review*, May 2, 1885:—LUMPE in the *Archiv für Gynäkologie*, combats the objection made to Credé's method of expressing the placenta, namely, that it powerfully disturbs the third stage of labor, and may be a frequent source of retention of part of the fetal envelopes. The essential point in the physiological separation of the placenta is the contractions of the uterus, and there is no reason why, when these are skilfully called into play at an earlier period, the method of expression should be different from the physiological process. The placenta separates from the wall of the uterus in the layers where the tissue-cohesion is the slightest. Whether this takes place quickly or slowly is, in Lumpe's opinion, all the same. The same result follows when the placenta is removed by traction. On careful comparison of both methods, no difference was found as regards either the fetal coverings or the condition of the patient. Other things being equal, it is certainly better to abridge the period of labor. Lumpe lays special stress on the fact that it is only after removal of the placenta that the patient enjoys perfect mental rest.

An abnormal course of the third stage of labor can only occur when one of three essential factors is not present: (1) normal innervation of the uterus (normal contraction and retraction); (2) normal connection between uterus and fetus; (3) normal condition of the blood. If one of these factors is absent, the third stage will be abnormal whatever method is adopted. If normal con and re-traction is absent, you have atony and the placenta will not be spontaneously expelled. Lumpe recommends in such cases to desist from expression, as the patient may lose much blood by vain attempts to produce contractions of the uterus. In cases where the connection between the uterus and fetus is abnormally fast, it is evident that neither waiting nor expression can be effectual.

As regards the manner of expression he recommends waiting for half an hour after the birth of the child, for immediately after the birth the uterus

is more difficult to excite to contraction. Besides, in from a quarter to half an hour the placenta generally leaves the uterus in whole or in part. Very slight pressure is then required to expel it.

### INCONTINENCE OF URINE FOLLOWING LABOR.

By THEOPHILUS PARVIN, M.D., LL.D., Prof. Obs. and Diseases of Women and Children, Jeff. Med. Coll., Philadelphia.

From the *College and Clinical Record*, April 1, 1885:—An important factor in causing her present condition, possibly, was the early ending of the labor by forceps; such early resort to instrumental delivery strikes one as remarkable, and yet it may have been required by some condition of the mother or of the child, and therefore one ignorant of the obstetrician's reasons for his action ought not to criticise. But certainly you will only in rare exceptions find it necessary to use the forceps in a primipara when labor has lasted only five hours.

Very probably you think, as I did upon first examining the patient, that the incontinence of urine results from a fistulous communication between the bladder and the vagina, in other words, that the patient has a vesico-vaginal fistula. But upon careful exposure of the vesico-vaginal wall I could not find, either by touch or by sight, any opening: and further, when I injected milk into the bladder not a drop escaped into the vagina, though the bladder was quite well filled with it. The hypothesis of a vesico-vaginal fistula, indeed of any urinal fistula, must be rejected. How then are we to explain this dribbling of urine? As I have had occasion to say to you before, one of the hypotheses as to the retentive power of the bladder is, that it depends upon longitudinal folds of bladder mucous membrane converging toward the internal orifice of the urethra. Now suppose these folds effaced by the child's head, not yet sufficiently molded, being forced through the genital canal, may not the suddenness and severity of effacement prevent their reformation, just as the ironer effaces the folds and wrinkles of recently washed and dried garments? But rejecting this as too imaginative, probably the true explanation of the condition may be found in considering the relation of the bladder and urethra to the pelvic floor, at least to that portion of it formed by a part of the pelvic and the perineal fascia.

But what shall be done for the relief of the difficulty, that is the incontinence of urine? Various medical means, such as strychnia, cantharides and belladonna, have been tried in vain, and I think it useless to make any more experiments of this sort. The only hope of cure is to perform the operation advised by Schröder; remove a fold of the bladder and upper part of the urethra—a small oval corresponding to these parts—and then stitch the raw margins together; this operation probably does good, not merely by narrowing the part, but also by restoration of separated fascia, thus corresponding to Dr. Emmet's new operation for so-called rupture of the perineum. I think that this operation would be justifiable, because the infirmity from which the patient suffers is so annoying and disagreeable, and sometimes painful; with her consent I will do it, only I cannot positively promise her a cure, nor can I fix the time of her recovery, should it occur. I may mention that this patient also has a ruptured perineum, and perineo-plasty ought, therefore, to be done for this condition.

### PUERPERAL CONVULSIONS.

By J. E. BLAINE, M.D., of Denver, Col.

From the *Denver Medical Times*, April, 1885:—A convulsion occurring or about to occur demands immediate control by rendering the system unimpressionable to the uræmic irritation. To accomplish this chloroform has many advocates and deservedly ranks high, the principle objection to its use is the transient character of its effects, requiring its constant application, which in itself is a source of great danger, and in cases where the convulsions occur in the beginning of labor it is quite apt to cause a cessation of the pains, prolonging the labor and increasing the danger, also after several

hours of administration it appears to lose its power. It may be given at the very first sign of nervousness, agitation or tendency to convulsive action, continued till the patient falls asleep, discontinuing it then till she awakes or shows a tendency to return to her former state. Chloral and the bromides appear to have no especial power in this disease and the difficulty of administering them so as to secure their absorption promptly, places them without the pale of prompt reliable remedies. Morphia, hypodermically, seems to fill *all* the requirements, easily administered, almost immediate in its action, and in full doses controlling the spasms from six to ten hours. The objection to its use is that we may be unable to control its toxic effects, especially if given during the coma; but in this disease, each recurring convulsion, increases the danger largely, the brain becoming congested and the coma deeper, and its indications far outweigh the contraindications. In each of my cases as soon as a good liberal injection of morphia was given (and I gave them immediately on cessation of the spasm) a very satisfactory condition was brought about,  $\frac{1}{2}$  of a grain of morphia only contracting the pupil, from its previously enlarged state, to about normal size. The dangers of its administration in large doses and at this time can be to a great extent guarded against by antagonizing its lethal effects with atropia. Morphia, also, by its relaxing the peripheral nerve terminations favors perspiration and the atropia prevents it from stopping the urinary secretion, being a parturient remedy of undoubted value it relaxes the cervix; quieting the spurious pains enables the expulsive contractions to produce their full effect. In my first case it required one grain of the morphia in the two and a half hours to obtain control of the spasms and it lasted nine hours. My other cases beginning with a larger dose I had control almost immediately. In the majority of cases reported in the past ten years the morphia treatment has obtained the best results. The declaration was made in the obstetrical society of New York City last year that, "The induction of labor and narcotization by morphia constitutes the treatment." A large dose of morphia is required in this disease and an injection from  $\frac{1}{2}$  to 1 grain is proper. In the July number of the *American Journal of Obstetrics*, four cases are reported, in three of which 1 grain dose was used: in the fourth  $1\frac{1}{2}$  grains—with complete success in each case. Venesection is much less frequently performed than formerly. With the cases of intense lividity of the countenance, injected eyes, strong, vigorous pulsation of the carotids, or in patients of a very strong constitution, a bleeding at once may prevent congestion of the brain and give time for the administration of other remedies, but the practice of repeated bleedings at short intervals has been rejected. Elaterum and castor oil are reliable, efficient cathartics—acting quickly and can be assisted by rectal injections. Jaborandi or Pilocarpine are of the greatest value—assisted by the hot air bath or bottles filled with hot water—in using the latter care must be taken to not allow them to come in contact with the body of the patient or serious burns may be given; Dr. Ferguson recommends the following as an efficient pack: A cotton sheet is folded and laid upon the floor, upon this is spread an oil cloth, and over this four folds of flannel wrung out of hot water; place the whole under the patient covering her from the axilla to the trochanters. In all cases delivery should be accomplished as rapidly as possible.

#### THE USE OF ETHER IN PUERPERAL ECLAMPSIA

Dr. JOHN P. REYNOLDS, Prof. Obs., Harvard, in remarks made before the Obs. Soc., of Boston (*Boston Med. and Surg. Jour.*) says:—"In accordance with an opinion which has been heretofore advanced by some of our members, I am strongly inclined to believe that in eclampsia continuous administration of ether will wholly prevent the recurrence of paroxysms. At any rate it is thought best to challenge from time to time the production of reliable evidence to the contrary. Ether thus employed should be given only by a physician. It must be so administered as to forbid any consciousness of discomfort or pain and to prevent restlessness. At the slightest indication of an approaching paroxysm it ought to be promptly carried to the surgical degree."

## CHLOROFORM IN LABOR.

The editor of the Department of Obstetrics and Gynecology in the *Weekly Med. Review* quotes from an article in the *Epitome* for March, 1885, which contains the views of Dr. Reynolds, of Boston, concerning the use of chloroform in labor, and then says:—"We cite this as an unwilling tribute to the merits of chloroform in labor, and to show how little even able men, as yet, appreciate the advantages of anesthesia in the parturient stage.

It is, above all, in operative obstetrics that we experience the great blessings of chloroform; it is there that the help is greatest, as the need is most.

Chloroform relaxes the muscles and thus enables us not only to introduce hands or instruments without suffering to the patient, but with much greater ease; in fact, we can accomplish rapidly and with facility by the aid of chloroform what would be almost an impossibility without it, certainly, a difficult and painful task.

Our new friend to chloroform falls into another error; he says: "Use it for the comfort it gives, even if it does prolong labor a little." Now, he who has used chloroform, knows well that it does not prolong, but shorten labor; by lessening the tension of the constricting muscles it aids expulsion; by relieving the accompanying pain it enables the patient to make more forcible efforts at expulsion, which proves the more successful, as the spasmodic contraction of opposing muscles is done away with. This wonderful anesthetic is almost a specific in labor. It lessens the pain, and, if properly used, hastens labor."

## PLACENTA PRÆVIA.

By MALCOLM McLEAN, M.D., of New York.

In a paper read before the *Section in Obstetrics N. Y. Acad. Med.*:—Dr. McLean gave the following conclusions: (1) In any case of placenta prævia avoid the application of chemical styptics. (2) Inasmuch as the dangers from hemorrhage were greater than all else, preparations to induce premature labor should be made. (3) In primiparous cases with rigid tissues, the vagina should be well distended with the colpeurynter or tampon until cervical dilatation had taken place. (4) It is safer to rely upon thorough continuous pressure by Barnes' dilator than upon pressure by the fetal parts. (5) When the prævia is lateral or partial, and there is no indication for hastening the labor, the method of Braxton Hicks may be practised, consisting of turning by the bimanual method as soon as possible, pulling down a leg and with it and the breech of the child tamponing the ruptured placental vessels, and then allowing the delivery to be completed spontaneously, or aided by gentle traction. (6) When the head presents and the os is dilated, or very dilatable, rupture the membranes. (7) Podalic version is to be preferred to the use of the forceps within the cervix, especially when the cervix is dry. (8) Complete vaginal tamponing may be applied and left in position in cases in which other means are not at hand. (9) The dangers of septic infection with the proper use of tampons and dilators is so slight that it need not be considered. (10) Whenever possible delivery should be accomplished deliberately. (11) The greatest care must be exercised not to convey infectious material to the mother's system, which involved the application of the great principle of absolute cleanliness.

The method of treatment which Dr. W. T. Lusk felt disposed to recommend was to tampon the vagina, if dilatation of the cervix had just begun, and, as soon as possible, introduce a Barnes' dilator into the cervix, and when the cervix was sufficiently dilated to render extraction of the child a matter of no great danger, proceed to follow it up by the method of Braxton Hicks. He should hesitate very much before adopting the method by rupture of the membranes and trusting to uterine contractions to bring the head down.

Dr. Isaac E. Taylor recommended, in cases of placenta centralis, dilatation of the neck of the womb and version, and the latter could be accom-

plished best by the bimanual method, that is by the aid of external manipulation. The dilatation may be accomplished by Barnes' dilators, the vaginal tampon, etc.

### INVERSION OF THE UTERUS.

By HENRY E. CRAMPTON, M.D., of New York.

In a paper read before the *Section in Obstetrics, N. Y. Acad. Med.*, Dr. Crampton arrived at the following conclusions based upon 210 cases, occurring or treated since 1850:

(1) Inversion of the uterus is preceded by paresis of some portion of the uterine muscle (not necessarily of the placental site) caused either by too frequent child-bearing, tedious labor, previous miscarriages, traumatism (blows upon the abdomen received during pregnancy or labor), emotional excitement (notably in primiparæ), or too rapid labor. It is a pure neurosis in its inception. Traction upon the cord induces prolapse, or if severe, procidentia. It will *never alone* produce inversion, but may facilitate it if paresis is present.

(2) It is more apt to occur in first than in subsequent deliveries.

(3) This liability in primiparæ is due to the peculiar emotional excitement preceding and associated with a first labor, reflected upon the exhausted uterine muscles for the first time called into unusual action (eight in ten of all cases of puerperal eclampsia occur in primiparæ for analogous reasons). Given a slight degree of depression, and the natural vigorous contractions of the uterus in a first labor become a source of increased danger.

(4) In the great majority of cases of recent inversion, firm and persistent pressure (under anæsthesia) upon any portion of the inverted organ will serve to reposit it.

(5) In chronic inversion gentle, graduated, and long-continued pressure, either manual or instrumental, or both combined, has proved the most successful treatment. Forcible taxis is not devoid of danger. Extirpation is a last resort.

(6) Chronic inversion would be rarely found if every physician adopted the invariable custom of making repeated and careful vaginal examinations within twenty-four hours after every labor.

(7) The prophylactic treatment of uterine inversion is obviously the same as that required for the prevention of puerperal eclampsia.

### WEIGHT OF THE NEW-BORN CHILD.

The *Weekly Med. Review* gives the following translation from WOOLFF's Inaugural Dissertation. The results were derived from the careful weighing of 2,083 children in the lying-in hospital at Basle.

I. Well developed, full-term, male children of multiparæ weigh more than female children, the children of primiparæ and those born before term. The great increase in weight of the child during the last month of pregnancy is made evident by the fact that there is less difference in the weight of those children born of primiparæ and multiparæ who are delivered before term.

II. The great majority of new-born lose weight during the first hours of extra-uterine life; but in nine per cent. of the children there is an increase in weight.

III. Then the decrease in weight ceases in the first three days in children of both sexes. Children born at term and those born of multiparæ, as a rule, complete this period of decrease in weight more rapidly than those born before term and those born of primiparæ.

IV. The average decrease in weight is from 100 to 300 grammes, that is from three to ten ounces. Sex and development of the child is without influence upon this.

V. In the same time a larger number of male children attained their initial weight than of female children, males borne by multiparæ in greater number than those borne by primiparæ.

VI. Half of all new-born children attained again their initial weight (the weight at the time of their birth), upon the seventh day. It is an exception for a child to still fall short of its initial weight upon the fifteenth day of its life.

VII. In the first week of life it is more common for male children and children born of multiparæ to again attain their initial weight than for female children and those born of primiparæ.

VIII. During the period of hospital life, male children are more prone to develop and increase above their initial weight than female children. Likewise those born of multiparæ.

IX. The average daily increase is ten grammes, (2½ drachms.) Children born at term, male children and those born of multiparæ increase more rapidly in weight.

X. Constitutional disease of the mother influences the development of the child; those born of consumptives, women suffering from puerperal disease or those who have undergone abortion develop most slowly.

XI. If the mother's milk cannot be given as nourishment exclusively for the new-born, other preparations should be added. Cow's milk and condensed milk are the best substitutes for mother's milk.

#### THE TREATMENT OF THE NAVEL IN THE NEW-BORN.

Dr. CHARLES M. GREEN in a report on Obstetrics published in the *Boston Med. and Surg. Jour.*, refers to Credé and Weber, in the first of a series of communications from the obstetric clinic in Leipzig, consider this subject with reference to two dangers which threaten the child:—(1) Secondary hæmorrhage from the umbilical cord. (2) Inflammation of the navel itself.

Regarding the exact time when the ligature should be applied to the cord it is certain, that immediate ligature is not advisable, because thereby a considerable quantity of blood would be lost to the child. It is unnecessary to wait for complete cessation of pulsation, but until the pulsation is weak and the umbilical vein has collapsed: this would be under ordinary circumstances in from three to five minutes, when the child has cried lustily several times.

But of greater importance than the time when the cord should be ligated is the material with which it is tied. The material which the authors seems best to stand the test of experience is caoutchouc, originally proposed for this purpose by Budin. The authors have used small bands of this material, or slender rubber drainage tube, in their Leipzig clinic since July, 1883, and not a single case of secondary hæmorrhage has occurred. A band about eight inches long and one-twelfth of an inch thick (or a piece of rubber drainage tube of corresponding strength) is applied to the cord firmly tied and the ends cut short.

The subsequent treatment, which the authors believe best calculated to prevent moist gangrene and septic inflammation of the navel, consists simply in enveloping the short residual cord in common absorbent cotton and applying the usual abdominal band. After the morning bath the cord is to be carefully dried, and fresh cotton applied. Since its adoption inflammation of the navel has not been observed.

#### EMPHYSEMA OF THE NECK OCCURRING DURING LABOR.

—In the same report we find the following reference.—Mr. F. H. Champneys (London) has made an experimental inquiry into this subject and reported his results to the Royal Medical and Chirurgical Society at a recent meeting. It appears that the accident occurs about once in two thousand labors and is caused by the violent and prolonged expiratory efforts of the second stage.

In making his experiments Mr. Champneys used healthy foetuses (with two exceptions) was performed and the trachea connected by a T. The conclusions from the experiments were the following:—“(1) The cause of emphysema of the neck during labor is rupture of the lung tissue, the air escaping near the root of the lung, passing beneath the pulmonary pleura into the anterior mediastinum, and so beneath the deep cervical fascia into the neck. (2) The weakest part of the lung are opposite the pleural reflections, that is

the spaces between the lobules and the fissures between the lobes, and especially the anterior surface of the root of the lung. (3) Pneumothorax, when it occurred during experiment, had nothing to do with the production of emphysema of the neck. The healthy bronchi and trachea are able to resist the greatest possible expiratory efforts. (4) The lungs and pleura, when quite air-tight, are freely permeable to liquids. (5) The usual rules of practice, to restrain bearing down and accelerate labor after the production of emphysema, are sound. (6) The accident would seem to be noted in about one case in two thousand; but it is not improbable that the slight cases are overlooked. (7) The air emerges from the thorax along the great vessels, but may not become superficial till it has travelled higher up. (8) The emphysema of the lower part of the trunk, usually connected with rupture of the uterus, belongs to quite a different category, and is generally associated with a fatal result." The air is absorbed in a week or so and the cases always end favorably.

### ANÆSTHETICS AND ANTISEPTICS IN MIDWIFERY.

By W. SYMINGTON BROWN, M.D., of Stoneham, Mass.

In a paper read before the Obs. Section, of the *Suffolk District Med. Soc.*, and based upon forty years' experience, Dr. Brown gives his views on the use of anæsthetics and antiseptics in midwifery.

*Anæsthetics.*—The foremost question under this head is, Do anæsthetics injure the patient? I am pretty sure that they do not. Since 1849 I have used ether, chloroform, or a mixture of the two with alcohol, in every case where the woman was willing to breathe an anæsthetic. Some object; they are afraid to take it, and these I do not urge; but the majority are glad to get it before the labor is over. As a general rule I do not give ether during the first stage,

High authorities tell us that there is a greater tendency to post-partum hæmorrhage after ether or chloroform has been administered. During the last sixteen years I have not employed chloroform in midwifery practice, except as a remedy for convulsions; but I believe that ether, in moderate doses, does not tend to bring on flooding. Ether is seldom given to the extent of unconsciousness. The patient knows what is going on, and can render voluntary assistance when solicited.

A small dose of ether acts beneficially in two ways: it blunts sensibility to pain and allows the abdominal muscles to aid in propulsion. Without ether the patient's will-power is instinctively exerted to delay the labor; with it, the canal is more likely to be relaxed, and the voluntary muscles are not so much restrained. The contractile power of the womb itself is not affected by moderate inhalation of ether.

*Antiseptics.*—Cleanliness is a good thing in midwifery, and antiseptics are to its aides-de-camp. A young doctor who keeps his nails in mourning will eventually have to mourn the absence of a lucrative practice. Still it is possible to have too much of a good thing. Dr. Thomas, of New York, has recently taken a stand on this subject which most physicians would call ultra. The rules and regulations he lays down might possibly be enforced in a hospital, but hardly in private practice. And even if they could be carried out, I question the advantage of trying to surround a physiological process with all the paraphernalia needed in a surgical operation. Carbolic acid has had its flood-tide, and begins to ebb. Corrosive sublimate will probably follow suit at no distant day. Please observe. I do not object to disinfectants or antiseptics in themselves. Both of the chemicals mentioned will, no doubt, be used occasionally with advantage. But I believe that carbolic acid nearly killed Dr. Thomas Keith, and not a few unfortunate patients have suffered from its wholesale reckless employment. I greatly prefer a weak solution of iodine, prepared with iodide of potassium, which may be diluted with water without precipitation, or a hot solution of permanganate of potass. In ordinary cases absolute cleanliness is all that is needed. The routine employment of vaginal injections is likely to do more harm than good. I concur in the opinions expressed by Dr. Adams, of Framingham, in his interesting

paper read at your last meeting. Dr. Wm. Goodell's suggestion that lying-in women should be encouraged to assume the erect posture early, with a view to facilitate the removal of clots and *débris*, is an excellent one.

As already hinted, it is a good plan for the obstetrician to wash his hands, keep his finger-nails pared pretty close, and to fill the small remaining space with softened soap before making a vaginal examination. A Syracuse æsthetic M.D. kindly suggests that no harm would result if he also washed his hands afterward.

#### AN ABSORBENT AND ANTISEPTIC DIAPER.

This much-needed article, we are told by St. Clair Thompson in the *British Medical Journal*, is used after delivery with great advantage instead of the ordinary napkin. The diapers are made of wood-wool, enclosed in oblong bags of corrosive sublimate gauze. These are about seven inches long by three inches broad, and about half an inch in thickness. They are tacked on to strips of waste linen (about a yard and a half in length), by which they can be attached to the binder, and kept accurately in position. They are very light, weighing less than half an ounce each; they are soft, flexible, cool, can be closely applied, produce no irritation, and absorb rapidly and thoroughly. A pad which weighed three drachms before use, when saturated with the lochial discharge, weighed two ounces and four drachms, that is, it took up and retained more than two ounces of blood. The natural antiseptic properties of the wood-wool are increased by the presence of corrosive sublimate in the strength of half per cent.

[A very nice, but we would say needlessly expensive apparatus. There is nothing better, and at the same time, more simple than salicylated, carbolated or borated cotton, which is most agreeable when warmed and snugly applied; no cloth is needed to hold it in place, though one may be used.]

We have for the past year done away with the filthy, poorly absorbing diaper altogether, and have used the antiseptic absorbent pad. A handful of antiseptic (salicylated, carbolated, or borated) cotton placed before the vulva and under the perineum is applied after dusting the parts with iodoform, and changed as often as necessary, from two to six hours.

This method is most agreeable, cleanly and safe, having, moreover, the great advantage that no soiled cloths need be kept about the house. The saturated cotton is at once thrown into the fire, as the most effectual method of disposing of it; consequently no masses of filthy linen accumulate, which invariably emit a certain stench and form a dangerous centre of infection.—*Ed.*—*Weekly Med. Review*, April 18, 1885.

#### THE TREATMENT OF MASTITIS BY BANDAGING AND REST.

By PHILANDER A. HARRIS, M.D., Paterson, N. J.

Dr. Harris gives the following conclusions concerning the management of the puerperal and nursing breast:—(1) That the breasts soon after delivery are strongly disposed to secrete milk, and will usually continue to do so for a few days, even if they be not nursed. If no attempt be then made to nurse or withdraw the milk, the secretion rapidly diminishes and they return to their normal size and condition of inactivity. (2) That, as a rule (to which there are probably few if any exceptions), the retained secretion does not undergo changes which convert it into an irritant fluid, but instead it remains innocuous to the walls of the ducts and acini which contain it, and under favorable conditions is finally absorbed without trouble or embarrassment to either the normal or inflamed adjacent tissues. (3) That, as a rule, the secretion of milk continues only while the natural stimulus, as nursing or other means of emptying the breast, continue to be employed. That the secretion, either in the normal or inflammatory condition, begins to abate when such stimulus is withdrawn, and will entirely cease after a week or two. (4) That an abundant secretion of milk which has recently and entirely ceased as the result of a complete withdrawal of stimulus, may be again recalled



upon the reapplication of the child. (5) That the presence of a decided inflammatory movement in the breast greatly diminishes secretion in the gland. (6) That the sympathetic relation between the two breasts is almost, if not wholly, a sensory one. That neither the function of secretion nor the condition of the circulation in one breast is appreciably and directly affected by either physiological or pathological processes which may be going on in the other.

Inflammation of the breast should be regarded as a progressive rather than a self-limited disease. It is attended by a train of pathological changes which become more severe and complicated until the conditions or circumstances which have produced them and which favor their continuance are removed.

The inflamed breast should be supported in a well-applied bandage, and no attempt made to nurse or withdraw the secretion until the entire subsidence of the inflammatory movement.

Sore and fissured nipples often produce inflammation of the breast. If, therefore, in any particular case we have reason to believe that the lesion will soon lead to the development of mastitis, or should it appear that a cure cannot be effected during the continuance of nursing, we shall be justified in the entire suspension of suckling through the affected part until a cure of the local trouble is established.

The well-applied bandage exerts a salutary influence on the morbid conditions which affect the nursing breast, and it is also the most grateful measure of treatment.—*Med. and Surg. Rep.*, March 14, 1885.

#### DUGAS' BANDAGE FOR THE BREAST.

By T. L. LALLERSTEDT, M.D., of Georgia.

From the *Southern Med. Record*, April 20, 1885:—The late Prof. L. A. Dugas always told his classes to use the many-tailed bandage for any soreness of the breast of females. Take a piece of cloth long enough to go around the patient's body, and cut out a hole in it large enough to admit the sound breast, so as to make no pressure on it. For the affected breast, cut a hole just large enough for the nipple. Put it over the chemise, if you like, or a female attendant can apply it. As the swelling decreases, any one can tighten the bandage. Where ladies desire to wean their children, using this bandage soon dries up the milk without pain.

This bandage is so simple and easy of application any woman can make and put it on. I have used it for about seventeen years, and never have had to open a rising breast in my practice yet.

The bandage should be long enough to go around the body and wide enough to cover the entire breast—say six or eight inches—the two ends being slit into strips about an inch wide, constituting a many-tailed bandage, which may be made to adhere so as to give uniform pressure upon the breast. This may be done by pinning the ends together, and tightening from time to time if it gets slack.

#### THE USE AND ABUSE OF THE TAMPON IN ABORTION.

By J. W. KENN, M.D., Buffalo, N. Y.

From the *N. Y. Med. Jour.*, April 25, 1885:—The tampon as a means of arresting hæmorrhage from the cavities of the body or from wounds has been known to the profession for many years. It seems a very natural thing, when blood is escaping with dangerous rapidity, to apply a plug of some sort to stop the leak. There are some things to be guarded against, however. That the bleeding is actually arrested, and not merely diverted into another channel, is of primary importance. Again, there are conditions in which the plug may do mischief. As applied to uterine hæmorrhages, these two elementary principles are so well known that no one will question the correctness of either. A woman with the vagina firmly plugged may bleed to death into the cavity of the uterus. A tampon allowed to remain too long may do

harm in various ways. A tampon injudiciously applied may precipitate the catastrophe it was intended to avert. Of this injudicious application of the tampon in cases of threatened abortion it is the purpose of this paper to treat.

Dr. Keene then quotes the views of Leishman, Playfair, Tyler Smith, Cazaux, Shröder, Lusk and others and says: Now, out of this mass of authority, sometimes conflicting, but generally unanimous, what deductions are to be drawn? That the tampon is to be used as a last resort, and only where the hæmorrhage is dangerous or the abortion clearly inevitable. We have, moreover, the observation of so experienced an obstetrician as Shröder, that the hæmorrhage of abortion is seldom dangerous and scarcely ever fatal—a view which Lusk seems to share. Of course, in their hospital experience, a physician is always at hand to meet any emergency, while in private practice, and especially in the country, another condition of things prevails. Yet it seems that enough has been said to indicate plainly that the routine practice of plugging, in threatened abortion with but slight hæmorrhage, merely as a precautionary proceeding, has no countenance from the authorities.

Besides the natural bias of the physician's mental makeup—his individual personal equation—his views will vary as his experience has been large or small. To a beginner, the loss of a slight amount of blood from the uterus of a pregnant woman is fraught with direful forebodings. As his experience widens, hæmorrhage will become dangerous less frequently, abortion will take its place under the inevitable class with much less facility, and the tampon will be employed only to fulfill its two legitimate indications.

The young practitioner is not the only offender in the over-free use of the tampon. His older brother may well look to the well-worn grooves in which his practice moves more or less smoothly to discover whether he, too, is not a devotee of the tenet that the fœtus has no rights which the physician is bound to respect. The tampon is legitimately employed only when for good and sufficient reasons it is necessary to terminate gestation.

### THE TREATMENT OF THE SECUNDINES IN ABORTION AND LABOR.

By WM. H. WATHEN, M.D., of Louisville, Ky.

Abstract of a paper read before the *Sections in Obstetrics, Amer. Med. Ass'n.*, April 28, 1885.—Three methods have been urged: (1) The expectant method; (2) The immediate removal; (3) A course, intermediate. During the first two months of pregnancy no placenta exists, and the egg, together with the decidua, is usually expelled in abortion *en masse*. Even in case of retention of membranes, during this period, no operative interference, of a radical character, should be instituted, as the fœtal envelopes are comparatively innocuous, and the danger from trauma is relatively great. From the third to the end of the seventh month, it is advisable to remove the secundines immediately, irrespective of the condition of the cervix as regards dilatation.

The retained placenta in premature labor, or labor at full term, should always be removed at an early period. If the os is dilated, the fingers or curette suffices; if the os is not dilated, and the finger had already been employed without effect, he employs a modification of the steel dilator of Scanzoni, and the secundines can be removed by the finger, curette, or forceps. Instead of the curette, a piece of copper or iron wire properly curved may be used. In the third stage of labor, if the placenta was not spontaneously expelled within thirty minutes, it should be removed. The old method of the application of the *vis a fronte*, by traction on the cord, and Credé's method of the application of the *vis a tergo* by expression, should be combined.

Dr. James R. Chadwick, of Boston, said it was impossible to formulate a universally applicable rule. The treatment during the first two months should be governed by the history of the case. If the woman was a "bleeder," immediate operative interference should be instituted; if she had had pre-

vious abortions, it was advisable to temporize. Placental forceps were absolutely worthless; the best instrument for the removal of the secundines, as insisted upon by Dr. Sinclair, of Boston, was the finger. The finger was also the best dilator.

### REPEATED ABORTIONS SUCCESSFULLY TREATED WITH POTASSIUM CHLORIDE.

By E. S. McKee, M.D., Cincinnati, O.

From the *Cincinnati Lancet and Clinic*.—Habitual miscarriage is a term severely criticised by some authors, yet there seems to be grounds for the belief of the habit being present in some women. Edis (*British Med. Journal*, 1875, ii, 65) calls it "an assertion of ignorance. We might as well say she aborts because she aborts." This and the statement that a woman is laboring under an abortive diathesis, he says, are "ignorant dogmas and it is useless to sit down disarmed and passive under their protection." It has nevertheless been the experience of every one largely engaged in obstetric practice, that some women are unable to carry their offspring to full time. They again and again bring forth stillborn children. One abortion paves the way for another. There is certainly evidence pointing toward the existence of a habit. Though it is possible that this may be explained away by the presence, in each case, of some cause undiscovered.

Sir James Simpson first used and recommended chlorate of potash in cases where repeated miscarriages had taken place from fatty degeneration of the placenta. He used it on the theory that an abundance of oxygen was supplied to the fetus through the placental tufts. In a discussion before the Edinburgh Medical Society in 1869, in which Sir James Simpson, Dr. Cuthbert and others took part, he said he gave it on account of disease of the placenta, but he believed also that it was a means of arterializing the blood. He was led to the use of the chlorate in such cases by the experiments of Davy and Stephens, who pointed out that an alkaline salt when brought into contact with the blood gave it an arterial appearance.

Dr. O'Shaughnessy and others have found by experiment that it gives a bright scarlet color to the venous blood and passes undecomposed into the urine. Dr. Isambert, however, denies the statements of O'Shaughnessy. Granted that the observations were correct they in no wise warrant the deduction, since partial mechanical asphyxia will produce the same result, as will also other alkaline carbonates.

It should never be triturated with sulphur, sugar, tannin or other readily oxidizable substances, except in the presence of water. Disregarding this precaution has caused many serious explosions.

The oxygenation of the blood produced by chlorate of potassium was very ingeniously applied by Dr. Fountain. He employed it quite successfully in cyanosis from heart and lung troubles. This investigator died from taking an ounce at a dose, experimentally.

Bruce used chlorate of potassium in six cases where repeated abortion had occurred. In all but one of these the children came to term.

Dr. Inglis said he never seen potassium chlorate fail. In one case, after sixteen stillborn children, the seventeenth was born alive under this remedy.

Dr. Cairn reported a case of a woman who had aborted five times.

Dr. Keiller had given it to one woman who had lost seven children, she was now in the eighth month and doing well. Had given the chlorate of potassium to the extent of several drachms per day largely diluted. The patient used it as a common drink.

Dr. John W. Tradi, of Sedalia, Mo., reports a case of "Threatened Abortion Successfully treated by Chlorate of Potash." His patient had been married six or eight years and miscarried each year at about the sixth month. He gave 2½ grains every three hours. The patient was in the worst possible condition and was obliged to remain in bed the whole period of uterogestation.

No less an authority than Karl Braun, in his recent work, speaks favorably of the use of potassium chlorate in miscarriage.

In the discussion which followed, Dr. Palmer, who had seen Dr. McKee's case several times, said: Here was a poor woman, twice married, pregnant by both husbands, who had miscarried some ten times consecutively, in from the fifth to eighth months inclusive, of utero-gestation. She applies to know whether anything can be done to prevent further miscarrying; if it is possible for her to have a living child. She thinks herself pregnant some four or five months. An examination proves that she is pregnant. It is her *eleventh* pregnancy. She is placed upon a certain remedy or plan of treatment and in due time has a healthy looking living child born to her at time.

Again she becomes pregnant for the *twelfth* time. The same treatment is again followed up, until the completion of utero-gestation, and at term she is delivered of a healthy, living child.

Are these results a '*propter hoc*,' or a '*post hoc*'? Can they fairly be attributed to the employment of the remedy?

Absolute, positive proof is wanting; but the evidence of the relationship of the use of the remedy to the results, is as presumptive, probable, or circumstantial, as it is ordinarily ever attainable in medicine.

DR. T. A. REAMY had used the remedy for twenty-five years and believed that he has succeeded in preventing miscarriages in a large number of different women, at least 15 or 20. It is true that not all were as sharply defined as the one presented.

#### THE VAGINAL DOUCHE AFTER NORMAL CHILDBIRTH.

The *Boston Med. and Surg. Jour.*, in an editorial commenting on the paper read before the Obs. Sec. of the Suffolk Dist. Soc. by Dr. Z. B. Adams, says:—

"We should say, therefore, in conclusion, that the vaginal douche in normal childbed, when given by competent hands and with proper apparatus, is not dangerous nor even hurtful; that it affords a refreshing sense of cleanliness and well-being to the patient; that it promotes the healing of abrasions and lacerations; and that it may be the means of preventing infection."

[The readers attention is also directed to comments on the same paper and subject "The Douch in Obstetric Practice," by the editor of the *Obs. Dep. of the Weekly Med. Review*.—ED.]

#### THE ACTION OF QUININE ON THE INTRA-UTERINE FETUS.

DR. A. VADENUKE (St. Petersburg Inaugural Dissertation, the *London Medical Record*) made sixty-five observations on parturient and five on pregnant healthy women. The former received from one to two grams (fifteen to thirty grains) of sulphate or muriate of quinine during labor, and the latter from half a gram to two grams a certain time before the term of expected labor. Then the urine of the new-born child was examined in regard to quinine. The results at which the author arrived are these: 1. Quinine taken by the mother goes over into the fetal system with relative rapidity, and in considerable quantity (about one-ninth of the quantity taken by the mother). 2. The greatest quantity of the drug accumulates in the fetal body by the end of two hours after its administration to the mother. 3. The intra-uterine fetus eliminates quinine within a little more than forty-eight hours, and the new-born child within seventy-two hours. 4. Single large medicinal doses of quinine, given to pregnant and parturient women, are absolutely free from danger to the fetus. 5. The repeated administration of large medicinal doses of quinine, at intervals of forty-eight hours, to pregnant women, is not accompanied by any danger to the fetus. 6. Quinine is not an abortive agent. 7. It may prevent abortion or premature labor, when the latter threatens, in consequence of high fever or malarial infection of the mother.—*Weekly Medical Review*, May 9, 1885.

## DISEASES OF WOMEN.

## ALEXANDER'S OPERATION OF SHORTENING THE ROUND LIGAMENTS OF THE UTERUS FOR RETROVERSION.

By PAUL F. MUNDE, M.D., of New York.

From the *New England Medical Monthly*, May, 1885:—Like every other practitioner I have met with intractable cases of retro-displacement of the uterus, which no form of supporter seemed capable of controlling. When therefore, Alexander, of Liverpool, proposed to cut down on the terminal fibres of the round ligaments, where they emerge from the external inguinal ring, and draw out the "slack" of the ligament and attach it to the pillars of the ring, thus tilting the fundus uteri forward and fixing it there, I hailed it as a very ingenious and plausible idea, and decided to seize the very first favorable opportunity to give it a practical trial.

The cases which seemed to me most suitable for the operation were those of retroflexion with more or less descensus of uterus and vagina, in which the extreme flaccidity of the uterus or the shortness of the cervix and consequent shallowness of the posterior inguinal pouch, rendered the permanent retention of the replaced uterus in its normal position by a lever pessary a manifest impossibility, the body of the organ always flexing back over the posterior bar of the pessary within a few days of its introduction. Here only an intra-uterine stem, or a Cutter vagino-abdominal supporter offers a slender prospect of permanent relief. Prolapse of the ovaries may be an additional indication. Such a case soon presented itself. Dr. Mundé then reports four cases. In the first (the first time the operation was performed in this country) the operation was successful, and at the end of five months the uterus was in the normal position. In his second case he failed to draw the ligaments out and attach the fundus. In the other two cases he failed to find the ligaments. He closes his paper as follows:

My experience with these four cases leads me to the following conclusions: (1) That Alexander's operation is chiefly indicated, because most feasible, in thin, spare women, with very little abdominal adiposity, in whom the pubic spines and the pillars of the external inguinal rings can readily be detected by palpation. (2) That in stout women the adipose tissue in the inguinal ring so obscures the terminal fibres of the round ligaments as to render their recognition and isolation a very difficult or impossible feat. (3) That in some women, both stout, (especially so), and spare, the ligaments are deficient in the white tendinous sheen which renders them easily recognizable, are, therefore, wholly muscular, and when isolated are very liable to break in the depth of the inguinal canal when drawn upon, and thus invalidate the operation even before it is concluded. (4) That it is impossible to know beforehand in which women the ligaments are normal in composition and insertion, and that, therefore, this operation must always carry with it an element of uncertainty in its very execution, which will prevent its prognosis from ever being as assured as that of many other plastic operations. (5) That with the exception of the tendency to deep suppuration in the inguinal canal, the operation is devoid of special danger, and, (6) That in certain well-indicated cases, (movable, flabby uteri, with retroversion or retroflexion, or descensus; spare, slender women, with well developed pubic spines and distinct external inguinal rings), the ligaments can easily be found, isolated, drawn out and shortened, and the fundus uteri permanently and satisfactorily fixed in the normal anteverted position.

Unfortunately, it is greatly a matter of chance whether the case turns out a favorable one for operation or not. In some cases, I am informed by anatomists, the round ligaments cannot be traced on the cadaver from the fundus uteri farther outward than to the internal abdominal ring, where they become lost as separate cords. Manifestly, if in such cases it is impossible to trace the ligaments from within outward, it will be much more so in the converse direction.

Despite the two failures reported, I shall not lose sight of the operation, for I feel that it has a certain *restricted* future.

### ANTEFLEXION OF THE UTERUS, WITH STENOSIS OF THE INTERNAL OS.

By P. F. CHAMBERS, M.D., Asst. Surg. to the Woman's Hospital, N. Y.

From the *N. Y. Med. Jour.*, May 2, 1885:—Anteflexion is normal in the fœtus. The congenital form of anteflexion is due to a continuance of this fœtal condition.

Of the two forms of anteflexion, where not congenital, the most frequent is flexion of the neck.

Anterior displacements are, as obtained from the statistics by the best authorities, found to be by far the most frequent, and, as they are usually of long standing when first seen, their results are the most serious, and the procedure necessary to produce a cure more severe.

I simply wish to attract attention to one complication of anteflexion and its treatment by the operation of trachelotomy and the use of the glass stem, its practicability and methods of procedure, the objects to be gained, and the dangers attending the operation. The operation is not resorted to by any one in every case of anteflexion, and I think should not be in any case, no matter how severe the displacement, provided it can be relieved by any easier procedure. The milder methods should always first be tested, and especially in cases where the stenosis is slight. But as an overweening fondness for operative procedures is bad, so is a failure on the part of the surgeon to do his duty through timidity equally culpable.

Of the sixteen cases operated upon by Dr. T. Gaillard Thomas, within the last eighteen months, in which I acted as his assistant and had the exclusive care of afterward, a cure was effected in every case. They were all of the class especially referred to in this paper, and I have no doubt are often met with in the experience of every general practitioner: A marked anteflexion with a resisting stricture of the internal os at the angle of flexure; the passage of Emmet's silver probe or Simpson's sound causing a sharp, agonizing pain, described by the patients as very similar, though in an exaggerated degree, to the pain caused by the dentist in extracting the nerve from a tooth; and the uterus being found fixed and with great difficulty partially replaced.

If any pelvic inflammation is found, the operation is postponed till all traces of it have disappeared. Everything being in readiness, the bowels are well moved a few hours before, and a hot vaginal douche is given immediately before the operation is to be performed. The patient being etherized—for absolute quiet is necessary to enable the surgeon to exercise the most delicate touch and exactness—she is put in the Sims position, a Sim's speculum introduced, and the vagina thoroughly swabbed out with a sponge saturated in a solution of bichloride of mercury, 1 part to 1,000 parts of water. Throughout the operation thorough disinfection should be used. The uterus is then held firmly with a tenaculum, and the flexible silver probe is passed, in order to find the exact direction of the canal. The long, probe-pointed blade of the Sims knife being set at the right angle, it is passed through the constricted portion as the probe is withdrawn, and, on withdrawing it, a straight incision about 8 mm. in depth is made in an anterior direction through the stricture and external os. The blade is again introduced, but at an opposite angle, the incision made in the posterior direction to the same depth, and the process repeated two more times, cutting in the lateral directions, so that at the finish the stricture and cervical portion will have been cut. The next process consists in snipping off with a pair of scissors the four teat-like processes left by the incisions. Should there be the slightest obstruction to its free passages, the incisions are to be deepened.

We have now reached the last stage of the operation, viz., the introduction of the glass stem and stem-sustaining pessary. The stem is of pure glass, 6 cm. long and 18 or 20 mm. in circumference, the size of a No. 18 or

20 male sound (French scale), and slightly curved; the base is of the circumference of a twenty-five cent piece, but twice as thick and with rounded edges. The pessary is of hard rubber, in shape the same as an Albert Smith retroversion pessary; but fitted between the side-bars in the first curve is a shallow hard-rubber cup, of sufficient size to admit the base or bulb of the glass stem. The patient is moved from the table to the bed and kept there for ten days, and quietly on her back for the first forty-eight hours. Should no unpleasant symptoms set in, nothing in the way of treatment will be necessary but the free use of the hot vaginal douche of carbolized water, night and morning. Occasionally a hypodermic injection of Magendie's solution of morphine ( $\pi x$ ) will be advisable as the patient is coming from under the ether. But should violent pain continue, or come on at any time later, accompanied with any rise of temperature, the stem should be removed at once, opium administered in sufficient quantity to relieve pain, a vaginal douche given, and, if necessary, intra-uterine injections, and the coil applied to the abdomen should the temperature reach  $101^{\circ}$  F.

The objects of the operation are therefore threefold: (1) To replace a displaced uterus; (2) to relieve a stricture; (3) to correct mal-menstruation.

The operation of trachelotomy is undoubtedly of great service, and there are many cases that can not be cured by any other means; but, in closing, I will again repeat that, with all its recommendations, it is an operation that should be very carefully performed and most closely watched, and I would advise no one to attempt it who is not thoroughly conversant with uterine surgery, for, of all the minor uterine operations, there is none attended with more danger.

#### GYNÆCOLOGISTS AND GENERAL PRACTITIONERS.

From an editorial in the *N. Y. Med. Jour.*, April 18, 1885:—There is a growing, yes, a full-fledged jealousy on the part of many of our general practitioners toward all who devote themselves exclusively to the treatment of diseases of women. If this unreasonable prejudice were only nursed in secret, it would still be unfortunate, but, when it finds expression, as it often does, in open disparagement of a specialty which is at once the pride and the honor of American medicine, we consider it not only a matter for regret, but an occasion for remonstrance.

What is the cause of this antagonism between general practitioners and gynecologists? Other specialists come in for a certain share of disapprobation, it is true, but it is upon the class we have mentioned that the phials of wrath are particularly emptied. It is asserted that gynecologists are narrow-minded, arrogant, and exclusive; that they "run in cliques," having their own societies, the membership of which is limited; that they view the world, as it were, through a speculum; that they sew up the cervix and remove ovaries without occasion; that they exaggerate minor ailments; that each one of them has his own particular hobby, and so on. On the other hand, the man of many aims is credited with despising the narrow boundaries of the pelvis, with the contents of which he glories in being unacquainted. This gives some idea of the present state of feeling among us, and we must say that it does little credit to the profession. Who, we would ask, are our prominent gynecologists—those in New York, for example? Are they not men who have spent years in general practice before gradually contracting their work within the limits of a specialty? The notion that they are necessarily ignorant of general medicine is controverted by the fact that no young man who aspires to follow their example is so foolish as to believe that he can attain to eminence as a specialist in diseases of women until he has spent many years in general practice. Of those who start with the contrary idea, few are ever heard of again.

It is time that a compromise should be effected between these antagonistic elements. Unquestionably the specialist does need a good deal of advice from his more conservative *confère*, and would do well to adhere to the latter's broader views of disease, while the general practitioner should at least credit the gynecologist with an honest even if mistaken zeal in the limited field.

## STERILITY.

By WM. H. WATKIN, M.D., Prof. of Obst. and Diseases of Women and Children in the Ky. School of Med., Louisville.

From the *Medical Herald*, April, 1885:—Sterility is from the Greek *στερεος*—barren—implying an incapacity for conception, and has as synonyms infecundity, barrenness and infertility. It is mentioned in the earliest medical literature, and biblical writers often refer to it as a reproach to woman. Since married life is seldom happy without children, frequently causing the husband or wife to become nervous, fretful and morose, it is the duty of every physician to study this subject thoroughly. Married women who remain sterile may not believe that they are perfectly formed. Not only does the happiness of married life often depend upon having children, but also the perpetuation of names and families, the descent of property and the permanence of dynasties and governments. You will probably be surprised to know that in Great Britain there are 500,000 married women sterile. This condition may be absolute or relative, congenital or acquired. In absolute sterility there is no impregnation of the ovule; or if the ovule be impregnated, fixation to the uterine mucous membrane is prevented, and there is no conception, the ovule being destroyed in the tubes or the uterus. In a form of sterility called "sterility not absolute," conception occurs, but abortion follows before the child is viable. In relative or acquired sterility, the woman has had one or more living children, but in number not according to the duration of married life. One child sterility exists in one out of thirteen fertile marriages. There is a high degree of both absolute and relative sterility in heiresses. In the British peerage there is one sterile woman in six and a half marriages, while there is but one sterile woman in ten in the agricultural and seafaring people. In 100 marriages in the British peerage 414 children were born, while in 100 marriages not heiresses there were born 624 children.

The average time from marriage to the birth of the first child is seventeen months, and the average time between the birth of children nineteen months, and women upon an average bear children from twenty-five to thirty-eight years of age—less than fifteen years.

As one in thirteen fertile women bear their first child after having been married three years, no woman should be presumed to be sterile until the fourth year of married life.

In order to thoroughly grasp the subject of sterility, it is necessary to have a clear idea of the physiology of conception. Several factors are concerned in the process of conception, and these should operate in harmony. The woman must produce healthy ovules and the man must secrete healthy spermatozoa. In each there must exist no conditions that destroy the vitality of the ovules or the spermatozoa before they came in contact, and this contact must take place under the proper conditions to produce impregnation. Then there must be no condition which prevents the fastening of the impregnated ovule within the uterus. Thus, you see, conception depends upon the combined forces or matter of two individuals, male and female.

The popular, as well as a large share of professional opinion, that sterility is nearly always due to some defect in the woman, is by no means correct.

Gross' statistics show that sterility is found in man on an average of one case in six. Statistics show that in eighty-three cases of bilateral epididymitis, only eight afterward had healthy spermatozoa in the semen, due probably to obstruction of the vasa deferentia. They also show that ninety per cent. of sterile women are married to men who have had gonorrhea before or since marriage. Spermatozoa may be secreted, yet in copulation not ejaculated on account of some congenital or acquired defect, or their vitality may be destroyed by the secretion of latent gonorrhea. When secreted and evacuated, they may be prevented from entering the uterus by any congenital or acquired defect that interferes with sexual connection, such as imperforate hymen, atresia vaginæ, etc., or from contraction of the external or internal os, flexions or conoid cervix. Or their vitality may be



destroyed by secretions from unhealthy conditions of the mucous membrane lining the uterus, cervical canal or vagina. These secretions may be caused by glandular cervical endometritis or by latent gonorrhea. Tumors connected with the uterus, or within the parenchyma of the uterus, or any disease of the mucous membrane or walls of the uterus, may not only prevent the entrance of semen into the womb, but also prevent fixation or conception of the impregnated ovule. Healthy ovules may not be produced on account of enfeebled health, from sudden profound shock to the nervous system, causing ovarian incapacity, or from any disease in or about the ovaries, such as chronic ovaritis, cystic, sarcomatous, cancerous or inflammatory degeneration, or from peritonitis and cellulitis. Of course there are no ovules in the absence of the ovaries. When they are secreted in a healthy condition their entrance into the uterus may be prevented by displacements, detachments or absence of the fallopian tubes, or by any condition that obstructs, contracts or obliterates their cavity.

The theory of mechanical obstruction has been almost universally taught in this country and in many parts of Europe; but recently the theory that sterility is due to local uterine disease has obtained a strong foothold in some parts of Germany, and especially in and around St. Petersburg.

Some women, while potentially fertile, are actually sterile, or may have relative sterility. This is seen in women who marry successively two or more men and have children by only one of them, or where a man marries two or more childless widows and has children by each of them. This may be styled sterility from incompatibility. Sedentary habits, confinement, changes in climate, obesity and inter-breeding are causes of absolute and relative sterility. That spasmodic dysmenorrhea is a cause of sterility is shown by the fact that in 332 women absolutely sterile 139 suffered from this trouble. Most fertile women have pleasure in sexual connection, and many may also have desire; but women may conceive who have neither desire nor pleasure, while others who have desire and intense pleasure remain sterile. In the absence of some positive condition in the woman that will prevent conception, we should not conclude that she is sterile until we examine the semen of the husband to see if it contains living and healthy spermatozoa. While a woman with syphilis may have absolute sterility, sterility not absolute, or relative sterility, we also know that sterility not absolute and relative sterility are often the result of syphilis in the husband when the wife is not infected.

### RAPID DILATATION OF THE CERVIX UTERI FOR STERILITY AND DYSMENORRŒA.

By A. H. GORLET, M.D., of New York.

From the *Medical News*, April 18, 1885.—Rapid dilatation is a perfectly safe procedure, free from danger if the patient be confined to bed for a few days after, and is effectual and permanent if done in the way described below, and an intra-uterine glass stem be used afterward to prevent re-contraction. Although it may be done in many cases without an anæsthetic, the result will be more satisfactory with it. Whether this be due to more thorough relaxation produced by the anæsthetic, or the operator dilates more thoroughly when there is no apprehension of giving pain, I cannot say, but probably the latter. In dilating for stenosis an anæsthetic should always be used.

Much may be accomplished by preparatory treatment if there be much rigidity of the parts or irritation. I use for a few days before, vaginal tampons of absorbent cotton, soaked with glycerine, to which boric acid has been added to saturation. A string being attached to the tampon, it can be removed by the patient in twenty-four hours, and the vagina thoroughly irrigated with hot water.

I use the Palmer dilator and find one size all that is necessary. The patient is anæsthetized and placed on a table in a good light. A Nott's tri-valve or a bivalve speculum is generally used with the patient on her back,

or the Sim's speculum may be used with the patient on her side. The cervix is steadied with a tenaculum, and by a slow steady pressure the dilator may be passed through both external and internal os when the direction of the canal has been previously determined by passing the sound. A shoulder on the blades of the dilator prevents its being introduced too far. I have never yet found it necessary to bore the external os with a pair of pointed scissors as recommended by some. When the dilator has been introduced as far as the shoulder, the handles are brought together gradually by the thumb and middle finger, while with the forefinger, the nut which works on the screw is made to follow up the advantage gained, and hold it there when the fingers become tired. Usually the dilatation is carried to the full extent of the instrument, and is not found to be too much. Tearing of the os has never occurred with this instrument in my hands, which is attributed to the way the blades separate—like a pair of scissors, and not parallel. After dilatation is complete the screw is loosened and the instrument withdrawn. The thick plug of mucus, already spoken of, is now removed and the cervical canal cleansed by means of a piece of absorbent cotton twisted around an applicator.

If flexion exists, the dilator is again introduced and turned upon its axis, reversing the flexion and the handles are brought together.

The intra-uterine stem which is now introduced is a glass rod, two inches long, size of a No. 20 steel sound (French); rounded at one end, very slightly curved, narrowing into a neck near the outer or lower end, and terminating in a button-shaped shoulder which limits penetration. This will be found very hard to handle, and is best introduced with a pair of long uterine dressing forceps, the blades of which have been wrapped with cotton, so that the glass button can be grasped firmly without slipping. A tampon of cotton saturated with glycerine and boric acid is placed against the cervix to hold the stem in position and relieve the irritation. During the first twenty-four or forty-eight hours it will be found that the stem is grasped firmly by the cervix, but after this there is some relaxation and it is apt to slip out. This shows that contraction does take place after dilatation, and that the stem should be used to prevent it. In cases in which there is flexion the stem serves to hold the uterus straight, or nearly so.

The patient is placed in bed and allowed to recover slowly from the anæsthetic. She very seldom complains of any pain or inconvenience after the operation, and if there is a little soreness it will pass off in a few hours. It will be even difficult sometimes to convince her of the necessity of remaining in bed. Usually the stem is removed every day, cleansed and replaced, but if there be very little discharge from the uterine cavity it may remain in position for two days at a time. After a week it is removed permanently and the patient allowed to get up. And if the weather is favorable, she may go out the following day.

#### ABDOMINAL SECTION, WITH REMARKS ON LAPAROTOMY.

By JAMES B. HUNTER, M.D., Surg. to the Woman's Hospital; Prof. of Gyn. in the New York Polyclinic.

In a paper published in the *N. Y. Med. Jour.*, April 4, 1885, Dr. Hunter reports a series of fifty cases of abdominal section, with remarks based upon about seven hundred operations which he has had the opportunity of witnessing.

It is well to make a rule, in all cases of abdominal disease, to submit the patient to a thorough examination as to diseases of the other organs before deciding upon any operation. It is especially important that the urine should be carefully examined, more than once, and the condition of the heart and lungs investigated.

*The Incision.*—It is always best, except in cases of large solid tumors, to begin with a small incision. An incision three inches in length is quite sufficient for diagnostic purposes, and for the removal of many large cystic tumors. It is easy to enlarge the incision, and in case that is not necessary there is greater certainty of obtaining good union of the abdominal walls.

*The Spray and Antiseptics.*—I consider the use of the carbolized spray invaluable in the operating-room. It should be very fine, and allowed to fill the room for at least an hour before the operation, the apparatus being placed high. During the operation it should be directed away from the patient, and on no account be allowed to play directly upon the exposed abdominal viscera. The spray is especially valuable when spectators are present, as constituting a sort of veil between them and the patient. The water used for the spray, as well as that used for sponges, instruments, irrigation, etc., in all abdominal operations, should be water that has been boiled, and, if possible, water that has been heated above the boiling point. The proper use of antiseptics is much more a matter of faith than of expense, and, without the cordial co-operation of all concerned, there will pretty surely be some vulnerable points. I now believe carbolic acid fully as efficient an antiseptic as the bichloride, while it is free from the dangers and inconveniences attending the use of the latter. The bichloride cannot be used for the instruments, and the use of two solutions is a source of perplexity to assistants and nurses. The result is often that neither one is employed thoroughly.

*Illumination.*—The small, portable electric light now to be obtained will be found of great practical utility in searching for deep-seated bleeding-points during a difficult operation.

*Drainage-Tubes.*—There is room for the exercise of much judgment in the use of drainage-tubes. If there is danger of hæmorrhage, a small, straight glass tube left in the lower angle of the wound gives a valuable indication of what is going on within. The tube may be examined from time to time with a syringe, or with a little absorbent cotton on a probe. If there is no bleeding, the tube may be removed within a few hours, and the wound closed. If there is evidence of oozing, the tube affords a means of removing the blood or serum. A little blood is often disposed of by the peritoneum without difficulty, but sometimes a very small quantity is sufficient to give rise to septicæmia. The danger of leaving a small tube in the wound, provided it is lightly closed and well covered with an antiseptic dressing, is very slight. Where there have been extensive adhesions separated, or where any portion of a cyst remains, or where there is a very large pedicle, the use of a drainage-tube is advisable. The best tubes are those made of glass, of small caliber, perfectly straight, and having no openings at the side. In adjusting these tubes in the wound all the sutures that will be necessary for the final closing of the wound should be passed while the patient is under ether, and the ends left long, so that, on the removal of the tube, the wound may be closed without pain or disturbance.

*Closing the Abdominal Wound.*—Sufficient attention has not been given to the very important matter of securing a firm abdominal wall. Sometimes the edges of the wound are not brought together exactly, and therefore fail to unite perfectly. Sometimes an abscess forms in the site of the wound, rendering the subsequent union slight and liable to yield to pressure. For over three years past I have made a practice of closing the peritoneum separately, with a continuous catgut suture, using what is known as the "button-hole" stitch. Before closing the peritoneum, one, two, or three silver-wire sutures, according to the length of the wound, are passed directly through the abdominal wall, including the peritoneum. These sutures are left loose until the others are introduced. The rest of the sutures are of silk, thoroughly carbolized, and are carried through everything but the peritoneum. Where a drainage-tube is used, the peritoneum is closed with catgut up to the tube. Since adopting this method of closing the wound, I have rarely seen abscesses or imperfect union.

*Refrigeration.*—The use of refrigeration, generally by the rubber coil, in incipient peritonitis, is of inestimable value. Where peritonitis is fully developed, it is still efficient. In cases of septicæmia the abstraction of heat does not necessarily benefit the patient. The temperature may be kept down to the normal point in such cases, and yet they may go on to a fatal termination.

## LAPAROTOMY IN ACUTE PERITONITIS.

From an editorial in the *Medical News*, April 18, 1885:—At a recent meeting of the Royal Medical and Chirurgical Society, the proceedings of which may be found in the *British Medical Journal* for March 14th, Mr. Treves reported the case of a woman, twenty-one years of age, in which the belly was successfully opened and freely irrigated with water, and a drainage tube inserted, on account of diffused peritonitis, the result of the bursting of a pelvic abscess. Mr. Marsh also read the notes of a case of a medical student, nineteen years of age, suffering from critical symptoms of sudden and acute peritoneal inflammation, in which incision gave vent to about two pints of fetid pus. The abdomen was thoroughly washed out with a 1 to 60 solution of carbolic acid, and a drainage tube introduced. Under subsequent injections of a solution of iodine, 1 to 1000, the patient recovered.

In the discussion which followed the reading of Treves's paper, Bryant, Thornton, Powell, Barwell, Goodhart, and Meredith were in perfect accord in commending the practice carried out in the two cases noted. The conviction, indeed, appears to be gaining ground that, in view of the great fatality of acute diffused peritonitis, and the futility of ordinary modes of treatment, laparotomy should be resorted to, thereby placing effusions into the peritoneal cavity on the same footing as pleural effusions. Its success in cases of peritonitis complicated by the presence of an ovarian tumor has long been established, and Mr. Lawson Tait states, in the *British Medical Journal* for March 21st, that he has opened the abdomen in not less than 44 cases on account of peritonitis, and that 41 recovered.

We believe that we express the opinion of all thoughtful surgeons when we say that the operation is indicated in all cases of suppurative peritonitis from whatever cause it may arise, as well as in examples of ordinary acute peritonitis, the result of perforating lesions of the stomach and intestines.

## OVARIOTOMY AND McDOWELL.

Dr. R. S. SUTTON, of Pittsburg, in his address as Chairman of the Section of Obstetrics, *Amer. Med. Ass'n*, April 29, 1885, says that the operation of ovariectomy, as left by McDowell, was almost as complete as at the present time. Two essential improvements were the introduction of the cautery by Baker Brown, and the cutting off of the long ends of the ligature by Nathan R. Smith. Dr. Sutton then showed that from McDowell's operation nearly all the intra-abdominal operations in surgery had sprung, and noted carefully the lectures and papers delivered on the subject during the last twelve months. He insisted, as in all former papers, upon greater care in the surroundings of all intra-abdominal operations, and in further proof of his position, pointed to the admirable results obtained by John Homans, of Boston, and Robert Battey, of Rome, Ga., both of whom used the carbolic spray. He stated that for himself he did not use the spray, but looked upon cleanliness and Listerism as linked so closely together that they might be said to be inseparable, for Listerism is the gospel of cleanliness.

Mr. Lawson Tait had said to him:—"I have sold all my right, title, and interest in Listerism with my tea-kettle to Battey."

## A SIMPLE AND EFFICIENT SURGICAL OPERATION FOR INCOMPLETE LACERATED PERINEUM.

By W. GILL WYLLIE, M.D., Gynecologist to Bellevue Hospital, New York, etc.

From the *Medical Record*, March 28, 1885:—Regarding the perineum as the movable point of attachment for the transversus perinei, the bulbo-cavernosus, the sphincter ani, levator ani, and some of the pelvic fascia, and also as the movable point of attachment for the anus and lower end of the rectum, and the lower end of the posterior wall of the vagina, the conclusions, are:

*First.*—As a rule, when the perineum is completely severed so that the fecal matter escapes passively, the position of the uterus is not affected.

*Second.*—The external or lower part of the perineum may be torn to a considerable extent and the position of the uterus will not be affected.

*Third.*—When the inner and upper part of the perineum is torn or over-stretched and relaxed, prolapse of the posterior and anterior vaginal walls will take place, and in time the uterus is retroverted, prolapsed, and may be forced out of the pelvis.

*Fourth.*—The explanation is that when that part of the perineum formed by the fibres of the levator ani and pelvic fascia, where they encircle and are attached to the lower end of the vagina and anus, are torn apart, and the lower end of the vagina and the upper part of the anus are loosened so that they are not held up and elevated when intra-abdominal force is exerted, as in straining at stool, both are forced out through the vaginal outlet, and they pull and drag down the uterus, and in time result in hernia of the pelvic organs.

*Fifth.*—In operating to restore the parts, we should aim to reunite the separated edges of the levator ani and pelvic fascia, and fix them to and in front of the lower end of the vagina and the anus, and lower end of the rectum.

*Sixth.*—This can be done efficiently only by denuding the retracted tissues on either side of the rectocele and uniting them over the rectocele. As the most important laceration is within the ostium vaginae, to reach these tissues the operation must be within the vagina; and to secure good apposition and to avoid dragging down and adding to the tension, most of the sutures should be passed within the vagina from side to side.

#### GELATINE PENCILS IN INTRA-UTERINE MEDICATION.

From an editorial in the *Weekly Medical Review*, March 14, 1885:—On account of the difficulty of properly applying fluids for purposes of medication to the endometrium, attempts have every now and then been made to devise more serviceable methods. A delicate syringe was given to the profession by Braun of Vienna, graded like the hypodermic syringe, with which a few drops of a fluid could be applied directly to the diseased surface without wasting the greater part upon the cervix. This is an effective, but dangerous, instrument; it must be handled with great judgment, and, though little known, is a most excellent means of medication, as no fluid is left in the cavity after discharging the contents of the syringe, its cotton-wrapped point withdrawing every superfluous drop. Then we have various small cylindrical bivalve specula to guard the cervix whilst the charged applicator is passed through them into the cavity proper of the womb.

Pencils were used fifteen or twenty years ago, by Martin, of Berlin, with perchloride of iron, nitrate of silver and other remedies, and proved a very excellent means of treatment, but never acquired much popularity. Our own country has furnished gelatine pencils which are certainly a most excellent invention. A great variety of remedies, both single and in very excellent combination are prepared in these gelatine pencils for the purpose of intra-uterine medication. They are non-irritating as far as a foreign body can be, are dissolved readily, and distribute the remedy thoroughly over the surface of the uterine mucosa. They are readily introduced by aid of the dressing forceps, but can be used only in cases in which the organ is enlarged, the cavity dilated. They serve an excellent purpose in the puerperal uterus, in cases of sub-involution, and in fact wherever the organ is flabby or the cavity considerably enlarged. We might add that we have used them with good effect in the rectum, as a long cylindrical pencil is more easily introduced than the ordinary suppository and is less irritating in a sensitive rectum.

The method is a most excellent one, as the gelatine slowly but surely dissolves, and the remedy is thus brought, for quite a length of time, in contact with the entire surface and has full opportunity to take effect. A pencil two inches in length, and about one-tenth of an inch in diameter, could be generally and safely used, and would, undoubtedly, popularize this valuable

method of medication, as such pencils could be used even in office practice in all cases; we could thus apply many remedies, for instance morphine, and belladonna, etc., which cannot otherwise be brought into convenient shape for intra-uterine medication, and those in common use such as iron, iodine, etc., could be applied to the endometrium without disturbing the cervix and its cavity. The method is a good one and it is right that we should test it, as we must look about for more perfect means of intra-uterine medication.

#### INFLUENCE OF CLIMATE AND LOCALITY ON THE UTERUS.

*Dramatis Personæ.*—Gynæcologist and patient who had married a widower with several children, one of whom was in the waiting-room. *Gynæcologist*, looking through the speculum,—“How many children have you?” *Patient*—“We have four in the family, doctor.” “Ah! four children. That explains the condition of your cervix, madam. It was badly lacerated at your last confinement, and can only be relieved by trachelorrhaphy.” “But, doctor, ain’t you mistaken? I—” “Mistaken, madam! Impossible. I tell you, you have laceration of the cervix, dating from your last confinement.” “But, doctor—” “Now, madam, I know what is the matter with you, and it’s no use for you to volunteer any further information. You must submit to an operation.” “But, doctor, I *will* speak. I never had a child. The children we have are my husband’s, by a former marriage.” Tableau.—*Medical Age*, April 23, 1885.

#### EPISIOTOMY IN THE IPARÆ.

We are in receipt of a pamphlet, a reprint from the *American Journal of Obstetrics*, vol. XVII, No. 3, 1885, by W. P. Manton, M.D., (Harvard), Dertoit. It is entitled, “A Plea for Episiotomy.” It seeks to show that episiotomy should be more frequently resorted to than it is, and adduces numerous statistics to support the proposition. He says it is particularly valuable in Iparæ, and intimates that if Iparæ were more generally accorded the benefits of episiotomy, the occasions for perineorrhaphy would be materially diminished. Episiotomy is, therefore, something which should become immensely popular with Iparæ. Don’t know what episiotomy on the Iparæ is? Dr. Manton tells you in his pamphlet that it consists in making an incision with a probe-pointed bistoury, or scissors (he prefers the knife), on one or both sides of the frenulum, about three cm. above its middle. Iparæ is, we suppose, gynæcological for primiparæ. The ingenuity of the gynæcologist in the direction of word-making is really something wonderful. He has knocked the ophthalmologist completely out, and the ophthalmologist is not to be sneezed at by any means.—*Ed. Medical Age*.

[Who can now doubt the propriety of a thorough education preparatory to the study of medicine, and the full understanding of medical lore!—*Ed.*]

#### LACERATED PERINEUM.

By W. GILL WYLIE, M.D., Prof. Gynæcology in the N. Y. Polyclinic; Gynæcologist to Bell. Hosp.

In a paper on the local use of antiseptics in gynæcology published in the *N. Y. Med. Jour.*, April 18, 1885, Dr. Wylie says of lacerated perineum: Even non-believers in the use of antiseptics will admit that operations for lacerated perineum often caused much pain and swelling, and nearly always the formation of more or less pus, and sometimes abscesses. By adopting the following method, one can operate in many cases without having any pus or even painful swelling. Examine the case with great care, and be sure that there is no disease of the rectum, vagina, uterus or uterine appendages that may infect the wound of the perineum during or after the operation, then wash the vagina, rectum, and vulva with a 1-to-3,000 or 1-to-5,000 bichloride solution, and operate under a stream of 1 to 10,000; after the sutures are in position, before twisting them up, dilate the rectum freely to relieve all tension from that source and enable the rectum to be emptied daily without effort on the part of the patient. Sprinkle iodoform freely on

the vulva, in the vagina, and over the sutures. Instruct the nurse not to use the catheter if the patient can pass her water without it, and each time the water is passed or the bowels are moved (and they should be made to move, after the first day, every day) to wash out the vagina with a gentle stream of a 1-to-60 solution of carbolic acid (Calvert's No. 1), and the vulva with a 1-to-5,000 bichloride solution, and after each washing to sprinkle the parts freely with iodoform. Keep this up for at least five days, or, better, until the ninth or tenth day, when the sutures are removed. By this plan of treatment opium may not be needed at all, for the iodoform prevents not only swelling, but in a great measure pain also. The odor of iodoform can be pretty well disguised by Tonka bean, etc.

#### THE TREATMENT OF CONSTIPATION.

From the *Boston Med. and Surg. Jour.*, March 26, 1885:—Constipation has been called a disorder of civilized society, being almost unknown among savages. The lower animals seem to be mostly free from it, although it is common enough among certain domesticated animals. It is relatively frequent among people of indoor, sedentary habits, as contrasted with those that are constantly occupied with outdoor employments. Deficiency of muscular exercise, severe mental application and worry, and inattention to the calls of nature are recognized factors of causation. Apart from organic obstructions mechanically giving rise to it, constipation may briefly be said to be due to want of action of the intestines, or want of secretion.

The therapeutics of constipation should be first and chiefly hygienic. Much can often be done to overcome constipation by the selection of articles of food (vegetables, coarser grains, fruits, especially dates, prunes, figs), which contain an excess of waste material, and which irritate the intestinal fibre. Physical exercise undoubtedly promotes peristalsis; the same may be said of the external application to the body of cold water; cold lavements, and even, in some persons, drinking freely of cold water, have often the same result. Exhausted or depressed innervation, whose casual agency is well recognized, may be restored by rest, change of scene, and a suitable dietary regimen. The formation of regular habits of defæcation, at certain hours, has always a prime therapeutic importance. But, unfortunately, reliance on hygienic means alone for the cure of constipation sometimes disappoints.

On such patients everything will be tried, and everything will fail to permanently benefit them. When one laxative has been used long enough to lose its effect—the intestines ceasing to respond to its incitations—another is prescribed, which, at first more successful, will eventually cease to act, except in excessive doses. Of all the old remedies, rhubarb will doubtless continue to hold a first place among the comparatively safe and certain anti-costive medicaments (the tincture and the infusion being the most useful preparations), while among the new, cascara sagrada seems growing in credit and favor, if we may trust its testimonials; not to refer to the large use now made of the rhamnus purshiana in this country. It is an American plant, obtained on the Pacific coast, and was first introduced into practice in 1878. It has lately been made the subject of experimentation on the Continent, and has proved to be of singular efficacy in the treatment of constipation, if we may credit the favorable report of Dr. Eymeri, of Val de Grâce, who has recently published a pamphlet on the subject. Eymeri regards it as a cholagogue as well as an intestinal stimulant; by its resins and volatile oil, it seems to act on the entire secretory apparatus as well as on the muscular fibre. The fluid extract gave the most gratifying results. It is tonic as well as aperient, as causing neither griping nor nausea and diarrhæa. Making all due allowance for exaggeration, we have doubtless in the sagrada a valuable addition to the materia medica, though it does not always prove a certain remedy, any more than any other drug.

#### PERMANGANATE OF POTASSIUM IN AMENORRHOEA.

Dr. EDMUND J. DOERING, of Chicago, (*N. Y. Med. Jour.*, April 11, 1885) has given the remedy a trial and his conclusions are: (1) Permanganate of

potash in doses of from two to four grains is an efficient emmenagogue, if administered for a period of not less than two weeks. (2) Its administration in doses large enough to be effective, is accompanied by severe pain which frequently necessitates a discontinuance of the remedy, and, hence impairs its value as an emmenagogue. (3) The most efficient method of administering the drug is capsules, taken midway between meals and followed by large draughts of some pure mineral water, like Silurian.

### THE INFLUENCE OF SEA VOYAGING UPON THE GENITO-URINARY FUNCTIONS.

By J. A. IRWIN, M.D., of New York.

In a paper based upon a number of years' experience as a ship surgeon, also upon a careful study of the literature of the subject, and read before the *Med. Soc. of the Co. of N. Y.*, April 27, 1885, Dr. Irwin said:—It would be seen that a sea voyage might disturb the menstrual habit in almost every conceivable direction.

Regarding periodicity, a premature return of the flow was far the most frequent effect. There may be a return of the sanguineous discharge at any time during the intra-menstrual epoch, but it is more liable to return if the voyage be undertaken during the first ten days following normal menstruation. On the other hand, complete and passive amenorrhœa for one or more periods after landing is a frequent result of the Atlantic transit.

Of the various effects of sea motion upon menstruation it was unfortunate that none was more universal than an aggravation of whatever discomfort is ordinarily associated with this process. In some women painful menstruation is experienced for the first time at sea. In the author's opinion the statement may be accepted as universally true that in every type of dysmenorrhœa the discomfort experienced is increased, certainly at the first, and usually at subsequent menstruations during the voyage. If there were any exception to this rule it must be in certain neurotic states.

A sea-voyage was likely to hasten puberty or the first menstrual flow. Some women who were undergoing the climateric epoch also had a return of the flow during a sea-voyage.

The aphrodisiac influence of a sea-voyage was generally accepted, and it was easy to understand that an increased blood supply to the genito-uterine system, should excite the sexual instinct. But there might be other conditions than the mere influence of the voyage at the sea itself which would tend to produce this result.

An ocean-voyage should be regarded as a potent emmenagogue, having in addition to the special influence mentioned, a well-marked tonic, alterative, and sedative influence. With these characters it is entitled to head the list of therapeutic agents of similar effect, and should no longer be prescribed empirically, but with a definite object in view. There are many many cases in which this local and perhaps constitutional influence was indicated.

In the conditions included under the term chloro-anæmia with amenorrhœa and retarded sexual maturity, certain forms of leucorrhœa and uterine hysteria, in undeveloped school girls, a typical case of which class had been described by Dr. Emmet, in this class of cases a sea-voyage would be indicated.

Again, there were many conditions of the genital organs, which, if not positively interdicting a sea voyage, demanded special prophylaxis and skilful attention while on board the vessel. Almost every form of uterine and ovarian disease became worse while at sea. Uterine displacements were unfavorably affected during the voyage.

The treatment of uterine troubles during ocean transit should be conducted upon general principles.

The influence of sea-voyage upon utero-gestation was sometimes to produce abortion or early delivery. The vomiting attending seasickness was more violent than that of morning sickness, and was more likely to produce miscarriage. There was no uniformity of opinion upon this point, but it was the author's opinion that pregnancy, especially during the latter months,



predisposed to, and always aggravated, the most distressing features of seasickness.

Seasickness invariably prevents or suspends lactation.

### RUPTURE OF THE VAGINA DURING COITUS.

By JAMES R. CHADWICK, M.D., of Boston, Mass.

From the *Trans. of the Obs. Soc. of Boston*:—Rupture of the vagina by the male organ is of so rare occurrence that its possibility has been denied by some writers of authority, hence I wish to put the following case on record.

Mrs. P. L., a woman of ordinary size and well developed in every way, applied at my dispensary on December 17, 1884, with the following story: She was forty-eight years of age, had begun to menstruate at the age of fifteen years, and had ceased at thirty-eight years. She had been six years married to a sailor, with whom she had cohabited freely without difficulty or pain. She had never been pregnant. On December 14th her husband had returned from four months' absence at sea, and had had connection. The act was accomplished with difficulty. When it was effected she experienced a most intense lancinating pain on the right side internally. A profuse hæmorrhage from the vagina ensued, which, however, ceased before morning. A purulent discharge set in on the second day, and on the third she consulted me. On examination I found that senile atrophy had taken place, as is usual after the menopause, so that the vagina was much shorter and smaller in calibre than is normal in the adult. On the right side was a fresh longitudinal rent, an inch in length, located in the upper third of the canal, and opening into the cellular tissue to the depth of half an inch.

Two cases of this lesion are reported by Dr. Zeiss, of Erfurt, in the *Centralblatt für Gynäkologie* for February 21, 1885. In the first case the rupture was merely an unusually deep tear of the hymen in a virgin, giving rise to a hæmorrhage so profuse as to have endangered life. This occurrence is not unusual.

The second case was in a woman who had had a child three years before, and a second one six weeks previously. Coitus took place *à la vache*, with exceptional vigor on the part of the husband, during which the woman experienced sudden extreme pain in the lower part of the abdomen on the right side: persistent hæmorrhage ensued. The external genitals were found to be sound, with no signs of contusion. The uterus was greatly retroflexed. The dimensions of the vagina seemed normal. The cervix was firmly adherent to the right side of the pelvis. In the right vault of the vagina was seen a fresh rent an inch in length, into which the finger passed some distance.

### TWO CASES OF DANGEROUS HÆMORRHAGE FROM RUPTURE OF VAGINA DURING FIRST COITUS.

By PAUL F. MUNDE, of New York.

From the *Boston Med. and Surg. Jour.*, May 14, 1885:—Dr. Chadwick's case of "Rupture of the Vagina during Coitus," recalls to my mind two cases in both of which very severe hæmorrhage occurred from a rent in the left vaginal wall, in the first case the fissure being an extension of the physiological laceration of the hymen.

In neither of these cases did there seem to be a disproportion of the relative organs, nor could I learn that any unusual violence had been used. The vaginæ were apparently perfectly healthy, both ladies being young and of good constitution.

In the second case of Zeiss, quoted by Dr. Chadwick, the recent confinement of the woman and the adhesion of the cervix to the lacerated side of the vagina would readily account for the friability of the tissues, as would also the senile atrophy of the vagina in Dr. Chadwick's own case.

The treatment must obviously consist in the tamponade, repeated as long as danger of recurrence exists, or, if the rent is external, where a vaginal tampon cannot well touch it, the deep suture.

## DISEASES OF CHILDREN.

## ON TYPHOID FEVER IN THE YOUNG.

By A. JACOBI, M.D., Clin. Prof. of Diseases of Children in the Coll. of Phys. and Surg., N. Y.

From the *Archives of Pediatrics*, March, 1885, Dr. Jacobi speaks especially of the cases in his service in the Children's Pavilion of Bellevue Hospital, and makes them the basis for general remarks: We know of many epidemics in which the peculiar stools do not make their appearance at all, or are but rare, and less characteristic; still the disease is unmistakably the same, and the morbid changes in the intestinal mucous membrane are met with at autopsies. If that be so in the adult, it is still more so in the young. The infant and young child yields but little typhoid diarrhoea, indeed the most striking symptoms of the disease may be absent. The spleen may be but little swollen, meteorismus trifling, roseola absent in many instances, bronchial symptoms scarce—still the case is one of typhoid fever. Why this should be so is not easy to determine.

It is possible that the typhoid poison, which may enter through either the respiratory or the digestive organs, is more or less excluded from the alimentary tract of the young, and that the gradual introduction of the poison into and through the lungs is the main road through which typhoid fever enters the organism of the infant and child. That would explain, first, why the character of the disease is so much milder in the young; second, why diarrhoea is frequently missed, and constipation is apt to take its place in so many typhoid infants and children.

The local changes in the intestine are less marked than in the adult. In many cases, the region of the ileocecal valve only is affected. The mucous membrane exhibits but rarely the peculiar infiltration so common in the adult. The ileum has but slight and superficial erosions. The assumption, however, that where there are ulcerations, there must be diarrhoea, is not founded on uniform facts.

As a rule the average typhoid of infancy or childhood enjoys great immunity from the symptoms belonging to the nervous system. The temperature of the body in mild cases is seldom high; it ranges often between 101° and 104°. Frequently, the patient feels very easy with these elevations; indeed, it is a peculiar feature in the typhoid fever of all ages that the feelings of the patient stand in no relation to the height of the fever. There is but seldom that irregularity of the temperature curve of typhoid fever of which we hear and read so much.

Amongst the complications incidental to the typhoid fever of infants and children those located in the respiratory organs are apt to be of great importance. The bronchial catarrh attending every case is liable to develop into a mild or serious bronchitis; the latter into broncho-pneumonia. Though this may be met with in the adult, sometimes to such a degree as to give rise to gangrene, its frequency in advanced age cannot by any means be compared with the large number of cases in the young. Gangrene in the lungs of children suffering from typhoid fever I have seen in but a very few instances in the course of my professional life. In the young, hypostatic pneumonia is not frequent. After the age of eight or ten years it is sometimes found; at that age the typhoid fever assumes more and more the character it exhibits in more advanced age. Pulmonary edema is sometimes the termination of broncho-pneumonia in a very adynamic case. Fibrinous pneumonia is very rare. Pleurisy, when occurring, is always secondary. Parotitis is very rare indeed; so are laryngeal ulcerations; I never saw a case in a patient under ten years. Noma and cutaneous gangrene are not so frequent in typhoid fever as they are in measles. Renal affections are not frequent; some of those recorded may be accidental complications rather than the outgrowth of the infectious disease. The brain and its meninges are liable to be affected with hyperemia, as in every disease connected with high fever of an adynamic character.

The rules of general therapeutics hold good for every individual case; but they must be intelligently and conscientiously applied. The fever lasts a certain time—care must be taken that the organism is placed in a condition to resist its influence. The main dangers may arise from the elevation of temperature, the loss of blood, the diarrhoea, the insufficiency of nutrition,—this insufficiency depending on the condition of the nervous system impaired by the poison, and injured digestion,—finally the debilitated heart. If the expectative method of treatment means, as it has frequently been understood, the letting alone of the disease, it is all right; if it means letting alone the patient, it is all wrong. It is not the disease we have to look after, but the sick. It is true that three weeks will finish the disease unaided or undisturbed, as a rule, but also that a week or two may finish the patient unaided.

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#### RULES FOR THE GENERAL MANAGEMENT OF INFANTS, RECOMMENDED BY THE OBSTETRICAL SOCIETY OF LONDON.

As summer, and probably a dangerous one is approaching, we recommend a careful perusal of these rules to our readers. Cholera infantum will certainly abound—if not the genuine dread disease—and, in fact, all abdominal complaints to which children especially are subject.

*Washing.*—Cleanliness is of vital importance to the health of all infants, and they should have a warm bath at least once a day.

The body should be cleansed from head to foot with a sponge or flannel, and then quickly dried with a soft warm towel.

After three or four months the heat of the water should be gradually lowered, but it is not advisable to use quite cold water for young children.

*Clothing.*—The clothing of infants should be light, soft and warm, and arranged so as not to interfere with the free play of their limbs. All tight bandaging should be avoided.

The common practice of keeping the arms, shoulders, and legs of infants bare is hurtful. Children bear cold less well than grown-up people, and should be warmly clad, with the exception of the head.

*Ventilation.*—Pure fresh air is of extreme importance to children. The rooms in which they sleep should be as large and airy as possible, not overcrowded, and the windows should be opened freely and frequently.

*Sleep.*—Unless the weather is very cold, or the infant be premature or feeble, it is desirable that it should, from an early period, sleep away from the mother or nurse, in a cradle or cot, care being taken that it is warmly covered.

For the first few months a healthy infant will naturally spend the greater part of its time in sleep. Up to three years of age a mid-day sleep is beneficial.

In sleeping, as in feeding, regularity is of the utmost importance, and the infant should be put to bed at stated times.

Infants should be put directly into their cot or cradle, and not got into the habit of being nursed to sleep in the arms. All soothing medicines, cordials, spirits, or sleeping drops, should be strictly avoided, as likely to do much harm. Nothing of this sort should be given except under medical advice.

*Air and Exercise.*—In fine weather the child should be taken out at least twice a day, care being taken that it is sufficiently clothed in winter. In warm summer weather the more it is in the open air the better, taking care to protect the head from the sun.

*Feeding.*—Nothing is more important in the bringing up of infants than the careful management of their feeding. Carelessness or errors in feeding cause a large proportion of their illnesses and deaths.

*Suckling.*—Nature provides breast milk as the proper food for an infant, and suckling is by far the best way of feeding it. Provided the mother or wet nurse has plenty of milk, and is in good health, an infant requires and

should have no other food but the breast milk until after the seventh or eighth month.

The milk itself, for the first few days, acts as a laxative, and no other aperient is necessary.

Should the formation of the milk be delayed, a little cow's milk, diluted with an equal quantity of warm water, and slightly sweetened, may be given until the mother is ready to nurse.

The infant should, for the first six weeks, be put to the breast at regular intervals of two hours during the day. During the night it requires to be fed less often. As it gets older it does not require to be fed so frequently.

An infant soon learns regular habits as to feeding. It is a great mistake, and bad both for mother and child, to give the breast whenever it cries, or to let it be always sucking, particularly at night. This is a common cause of wind, colics and indigestion.

*How a Nursing Mother or Wet Nurse Should be Fed.*—A nursing woman ought to live generously and well, but not grossly. She may take porter or ale, in moderation, with her meals. It is a common mistake for wet nurses to live too well, and this often causes indigestion in the child.

Should a nursing woman suffer from dizziness, dimness of sight, much palpitation and shortness of breath, or frequent night sweats, it is a sign that suckling disagrees with her, and that she should cease to nurse.

*Mixed Feeding when the Mother has not Enough Milk.*—When the mother has not enough milk to nourish the child, other food may be given, especially during the night. This should consist of the best milk, and is recommended under "hand feeding." This plan of combining breast-feeding with bottle-feeding is better than bringing up the child by hand alone.

*Weaning.*—The child should not be weaned suddenly, but by degrees, and it should not be allowed to have the breast after the ninth month.

When the child is seven months old, it may have one or two small meals a day of milk thickened with farinaceous food or nursery biscuits.

When the child is about ten months old, it may have one meal a day of broth or beef tea, with crumbs of bread soaked in it, or it may have the yolk of an egg lightly boiled.

When it is about a year and a half old, it may have one meal a day of finely-minced meat; but even then milk should form a large proportion of its diet.

*The Food of Grown-up People bad for Children.*—Meat, potatoes, and food such as grown-up people eat, are often given to young infants. This kind of food and all stimulants are entirely unsuitable, and are common causes of diarrhoea and other troubles.

*Hand Feeding.*—If the infant must be brought up by hand, the chief rule to remember is, that the food should resemble, as closely as possible, the milk provided for it by nature.

Milk, and milk only, should be used for this purpose. Asses' or goats' milk is the best; but cows' milk will in general do sufficiently well.

For the first month equal parts of pure fresh milk and hot water, the whole being slightly sweetened; for the second and third months, two parts of milk and one part of water; and after the third month pure milk should be used. It may be found necessary to alter the proportions of milk and water here indicated.

A table-spoonful of lime-water may often, with great advantage, be added to each bottle of milk, instead of an equal quantity of warm water.

The milk should be given from a feeding-bottle, which should be emptied and rinsed out after every meal, and the tube and cork, or teats, kept in water when not in use. Perfect cleanliness is most important, otherwise the milk may turn sour and disagree with the child.

The child should be fed regularly, just as if it were suckled; and it is a bad habit to give it the bottle merely to keep it quiet.

Milk alone should form the diet until the time arrives for giving other food, as recommended under the head of "Weaning."

Most of the mortality from hand feeding arises from the use of arrow-root, corn-flour, and other unsuitable kinds of food, which consist of starch alone,

contain no proper nourishment, and should not be used as substitutes for milk.—*Weekly Med. Review*, May 28, 1885.

### THE PREVENTION OF INFECTIOUS AND CONTAGIOUS DISEASES IN SCHOOLS.

From the *Medical News*.—The Medical Officers of Schools Association, which was formed in England in 1884, has just issued a code of rules for the prevention of infectious and contagious diseases in schools.

The following quarantine times, after exposure to infection, are recommended as safe if thorough disinfection be carried out *on the pupil's return to school*.—Diphtheria, 12 days' quarantine; scarlet fever, 14; measles, 16; German measles, 16; chickenpox, 18; smallpox, 24; mumps, 24; whooping-cough, 21.

Disinfection at home, it is urged, should not be relied on, but, immediately on the pupil's return to school, he should be washed with carbolic acid soap (ten per cent.) from head to foot, in a hot bath; and that clothes, books, and *everything* brought back by him, should be completely disinfected.

With regard to the question, "when may a pupil who has had an infectious disease go home or rejoin the school," the following are recommended as safe rules, viz.:

Scarlet fever—in not less than six weeks from the date of the rash, if desquamation have completely ceased, and there be no appearance of sore throat.

Measles—in not less than three weeks from the date of the rash, if all desquamation and cough have ceased.

German measles (Rötheln, or epidemic roseola)—in two or three weeks, the exact time depending upon the nature of the attack.

Smallpox and chickenpox—when ever scab has fallen off.

Mumps—in four weeks from the commencement, if all swelling have subsided.

Whooping-cough—after six weeks from the commencement of the whooping, provided the characteristic spasmodic cough and the whooping have ceased; or earlier, if all cough have completely passed away.

Diphtheria—in not less than three weeks, when convalescence is completed—there being no longer any form of sore throat, or any kind of discharge from the throat, nose, eyes, ears, or other parts, and no albuminuria.

### SIMULTANEOUS APPEARANCE OF MEASLES AND SCARLATINA IN THE SAME PATIENT.

DR. HARRF, of Cincinnati (*Cincinnati Lancet and Clinic*), reports the occurrence of measles and scarlet fever in his own family, and says that the first two cases were instances of well-marked, distinct, characteristic scarlatina, running a simple course, that the clinical history of the last two cases shows undoubtedly a combination of scarlatina and measles, namely whilst one child was infected with scarlatina, the other, a girl four years of age, was attacked with measles and then simultaneously scarlatina developed quite regularly. It was well known that the time of incubation in scarlet fever and measles comprised on the average one week and a half, but the clinical history of his cases shows that in the newly-born child the scarlatinous eruption appeared already on the eleventh day; consequently the stage of incubation *plus* the prodromal stage could not be more than ten days. The narration of these cases proves moreover that the highly praised hydrochinon has not as prompt an antifebrile effect as quinia, but as it is tasteless and seems to possess a slightly cathartic property, it may still become a valuable agent in the treatment of diseases of children, even if it is not so effective as quinia. Perhaps also larger doses have a better effect. A word may be added in favor of cool baths. Loss of consciousness, delirium, convulsions, muscular tremors, dryness of tongue—in fact all those symptoms that we designate as being a typhoid condition in scarlet fever—to what else are they due than a prolonged high temperature? As we, however, possess no more effective

prompt agent for reducing the temperature than water, in these acute diseases attended by a continuously high fever a hydropathic treatment must certainly be recommended above all others. The children undergo an entire change after the bath. All restlessness and excitement disappears, pulse, respiration and temperature, which were of an alarming nature before the bath, fall to the normal level, or at least nearly so, and remain so for a longer period than can be achieved by any other treatment.

DR. THAD. A. REAMY, said that the cases reported were not without precedent in their peculiarities. That scarlatina and measles have occurred and continued their course in the same subject at the same time has been unequivocally proven in many instances. Nevertheless, their association in this way is rare.

It is doubtless true that many of the cases reported in the literature of the subject present mistakes of diagnosis.

He knew of no reason why scarlatina and measles might not prevail in the same subject at the same time, or even commence on the same day, considering the matter from a philosophical or scientific standpoint, since it is well established that a child having had scarlatina gives it no exemption from a subsequent attack of measles, or vice versa.

Still further, there are many well authenticated cases of a second attack of measles in the same individual. The same is true of scarlatina. He had himself seen instances illustrating this point in both diseases. Moreover exposure to the scarlatinal poison will in many adults who have had the disease in childhood, produce the characteristic pharyngitis, and in some instances, glandular involvement. His own experience in this regard had been exactly that of the late Dr. George B. Wood whenever he had attended many cases during an epidemic of scarlet fever. On two occasions many years ago his symptoms had been quite severe. These clinical facts prepare us to accept without question the statement that scarlatina and measles may occur conjointly.

The report of Dr. Harff was also an interesting contribution on the affirmative side of the question as to whether an infant can have measles. It is well known that infants under six months are usually exempt, no matter what degree of exposure. Still, to this rule there are exceptions well sustained in the literature of the subject.

Sixteen years ago, during his residence in Zanesville, O., he was in attendance on a family in which scarlatina prevailed. The mother of the four children who suffered from the disease had a severe pharyngitis with the characteristic eruption, being sick about one week, this occurring two weeks before delivery. She had scarlatina in childhood. He had no doubt now that she was suffering symptoms due to the scarlatinal poisoning. Delivery occurring, the infant had the disease presenting all its characteristics, though not of a very severe type, appearing ten days after its birth. Nevertheless, during the same epidemic he attended a woman who was delivered in the same room where there were two cases of scarlatina, one of them proving fatal on the fifth day after the delivery, the mother and infant remaining in the same room during the whole time, the infant not contracting the disease. He had had almost a similar experience with small-pox.

In the case reported, the stage of incubation for the infant seems to have been seven days, assuming that it was not exposed until after birth. There is a bare possibility, however, that the child was affected with the scarlatinal poison before its birth through the placental circulation. The average stage of incubation for scarlatina is four to six days.

The report was interesting in another aspect. This parturient was thoroughly exposed, not only during labor, but during the lying-in state, to the germs both of scarlatina and measles. The lying-in room was next to the room occupied by the sick children; indeed, the door between the two rooms seems to have remained open most of the time, and the two apartments heated by the same stove. Exposure could not have been more complete, and yet Mrs. Harff did not contract either disease, nor have even a modified form of puerperal fever. But are we to conclude from this single case that there is no danger under such circumstances? Certainly not. In-

deed, while he most heartily congratulated the Doctor upon the recovery of his children and the escape of his wife, he could not approve of the exposure to which Mrs. H. was subjected. Her escape was no proof that there was no danger. To his mind the evidence that puerperal fever might originate from the poison of either scarlatina or measles was conclusive. In several instances coming under his own professional observation this danger had been demonstrated.

Dr. Giles S. Mitchell said that scarlatina and rubeola often succeeded each other in rapid succession, but it is extremely rare for the two diseases to manifest themselves at the same time in the same subject. He regarded the escape of the mother, however, as the most remarkable feature of the report. If any one thing is definitely settled among obstetricians, it is that the scarlatinal poison or the poison of measles will produce puerperal fever so-called. So thoroughly is this recognized that many physicians refuse to wait upon women in confinement while in attendance upon persons suffering from the above-mentioned maladies. The poison of measles is easily gotten rid of. A thorough brushing of one's clothing and a short walk or drive in the open air is sufficient. Not so, however, with the poison of scarlatina; it remains in the clothing often for weeks.

He further said that it is a well known fact that many physicians during their attendance upon cases of scarlatina suffer from sore throat, and he was convinced that physicians so suffering could communicate scarlet fever to susceptible individuals.

Dr. Reamy did not believe that infection could be carried by the sore throat of a physician attending scarlatinal patients.

Dr. Harff remarked that the best plan to adopt to avoid carrying contagion is to see the cases of scarlatina after the others have been visited.

#### THE COMMUNICATION OF SCARLET FEVER.

Disinfection (*Sanitarian*, March, 1885), gives an answer to the oft repeated question: "How long after recovery from scarlet fever before the danger period of communicating the disease to others is passed?" His answer is: If the premises and clothing have been thoroughly disinfected by exposing the premises, including all unwashable furniture, bedding, and clothing to sulphurous acid fumes, in the proportion of three pounds of sulphur to every one thousand cubic feet of air space, in a tightly closed room for twelve hours; the washable clothes, soaked for three hours in a solution of chloride or sulphate of zinc and common salt (four ounces of the zinc and two ounces of salt to the gallon of water), or of corrosive sublimate (seventy grains to the gallon of water), and afterward subjected to boiling water, and washed in warm water with the liberal use of pure soap; and the person has bathed in warm water and pure soap not less than three times a week, but better daily, for *four weeks*—there is no danger of communicating disease by the person. Premises, furniture, and clothing having been occupied or used by persons sick with scarlet fever, treated in the manner here described, and subsequently freely exposed to the atmosphere for *twenty-four hours*, cease to be dangerous. These conditions equally apply to measles and other contagious diseases.

#### COLD AS AN ANTIPYRETIC IN TYPHOID FEVER IN CHILDREN.

By A. JACOBI, M.D., Clin. Prof. Diseases of Children, Coll. Phys. and Surg., City N. Y.

From the *Archives of Pediatrics*, March, 1885:—The best antipyretic is cold. Its use has been praised and condemned, as deserves everything that is employed either properly or thoughtlessly. Most cases will do quite well with sponging, or friction with wet and cold towels. The latter plan acts both as a refrigerant and a stimulant. Cold bathing was once eulogized immensely and again abhorred, and warm bathing placed in its stead. The *rationale* of cold bathing is the cooling of the surface (that is, fourteen square feet in the adult; proportionately in the young) with its immense surface circulation. As long as this continues to be active, new blood will come to the surface every moment, and the whole body is thereby cooled. When it

is no longer active, the heart weak, the extremities cold, cold bathing is dangerous. The rule I have prescribed many years ago was this: No cold bath for cold extremities; no more cold bath when once, after it, the extremities remain cold or cool. In these cases, the surface becomes colder than before, it is true; the interior, however, warmer than it was.

A great promoter of circulation, and thereby of radiation, from the skin, is surface warmth, and particularly warm extremities. Warming-pans ought always to be used to the feet and legs when cold is to be applied. In place of cold bathing, I have always employed cold packing, from the chest down to the thighs, the arms mostly outside the pack. Nothing is easier than to wrap a baby up into a single wet towel, which is covered by a small blanket; in a case of urgency, it is replaced by another one (spread out beforehand), every two or five minutes. From twenty to forty minutes' packing will reduce the temperature from 106° to 101° F., and below. If below, it is often necessary to warm the little body comfortably afterward.

Now, is it always necessary to use a cold bath, or pack, or friction, or sponging, or an antipyretic medicine, in cases of typhoid fever? Is it advisable not to allow the temperature to rise above 103° F., but to reduce it forcibly—such was the rule with the German clinicians—as soon as it reaches that point? Is it at all probable that the disintegration of tissues in general, which is so much dreaded, is so sure to follow every case of elevation of temperature? Do we not know that the mortality in relapsing fever, where the temperature is so very high, is but trifling? The answer in the latter instance is this: that when a period of fever has passed by, one of apyrexia follows, with recuperation; and in typhoid fever, that, when there is the usual remission in the morning, or the two decided remissions in the course of twenty-four hours, the patient is not endangered, as he would be if there was no remission. Where this takes place, a rise to 103° or 104° F., which is but temporary, is of but little account, and debilitates but little.

Thus, the question whether antipyretics ought to be employed at all, or how long, is answered by the general condition. As long as this is satisfactory, and particularly as long as the heart holds out, a febrile temperature harms but little. The common sense and ripe experience of the physician has to decide in every individual case, whether or no, the heart requires strengthening or stimulation. As long as the pulse remains good, and not frequent, we need not hurry with either antipyretics or cardiac stimulants. The latter will often be more indicated than the former, and by improving the surface circulation, will reduce the temperature also.

#### TREATMENT FOR OXYURIS VERMICULARIS.

From the *Clin. Dep. Med. Record*, May 9, 1885:—(1) "If your correspondent who asks for a remedy for *oxyuris vermicularis* will thoroughly and persistently use injections of a solution of boracic acid and borax, say 3 j. of the former, and 3 ij. of the latter, to a pint of hot water (to be cooled to about 110° F. before using), twelve to sixteen ounces of the solution to be thrown into the rectum immediately after the morning stool, and repeated at bedtime, he will probably have success. Each injection should be retained from five to ten minutes, and occasionally it will be necessary to bring the vermin down from the cæcum and upper colon by saline cathartics. Hunyadi water acts well. Santonin and calomel are efficient, but objectionable on account of not always being harmless. The oil of *erigeron Canadensis*, in five- to ten-drop doses, in glycerine or castor-oil has acted well in some of my cases; but always in conjunction with the injections.

(2) "I have used with success, the fluid extract cascara sagrada, one-half teaspoonful each night, for some two or three weeks. I prescribed it for constipation, and cured a case of seat-worms of long standing, in a patient sixty-five years of age. I have used the same remedy since in children with success."

(3) "Referring to your correspondent who asks for a remedy for seat-worms, I will say that a three-grain suppository of mercurial ointment, repeated every second night until three have been used, will destroy seat-worms root and branch."



## THE CURE OF HERNIA IN THE INFANT.

By W. B. DE CAEMO, M.D., Instructor in the New York Polyclinic.

From the *Medical Record*, March 21, 1885:—It is an error to assume that nothing can be done to relieve the adult sufferer from hernia, and it is a still greater error to assume that hernia in the infant cannot be cured. Careful, early, and persistent treatment will be rewarded in almost every instance by the cure of the case, and the child saved much subsequent trouble and suffering.

This result cannot be attained by recommending the use of an appliance, no matter how perfect it may be, and leaving the case without further attention, for while we have, as I believe, nature on the side of cure, she requires the intelligent aid of the physician, and that aid should extend over a sufficient period of time to insure the cure of the case.

I wish to make special mention of two or three causes of infantile hernia, as unless these are recognized and removed, success will not be likely to attend its treatment.

Phimosis is not only a more frequent cause of hernia than is generally supposed, but its presence is an almost insurmountable obstacle to the cure of the case. It is highly important that this difficulty should be removed at the outset. This done, an existing hernia will yield readily to treatment, and a cure result in due time.

Not infrequently constipation is the cause of hernia in infancy, and inquiry should always be made on this point.

Another cause, which I have found in several cases, is the customary habit of tight bandaging; some nurses being accustomed to tightly bandaging the child as well as the mother. This forces the viscera into the lower part of the abdominal cavity, and produces undue pressure upon this region.

It has been asserted by some writers that congenital hernia is by its very nature incurable; this, in the light of repeated experience, should be looked upon as wholly incorrect.

In congenital hernia there is one complication occasionally met with, with which it is best to be familiar, as if not understood it makes treatment difficult and perplexing. I refer to the presence of fluid within the abdominal cavity, which descends into the scrotum with the hernial contents. In quantity it may amount to one, two, or three ounces; it usually returns when the hernia is reduced, but cannot be retained within the abdominal cavity by any appliance that can be tolerated by the infant, and within a short period of time after the truss has been applied it will be found again in the scrotum.

So far as my observation goes it has not been necessary to adopt any special treatment in these cases; usually a properly fitted truss with a small convex pad will retain the intestine, and the fluid will, ordinarily, disappear within the first month or two.

"At how early an age is it proper to begin the treatment of hernia?" is a question that has been repeatedly asked the writer by physicians. There appears to be almost universal doubt in the professional mind on this point, and many practitioners feel that they are giving the patient the "benefit of the doubt," by advising delay of treatment until the child reaches an age of one, two, or three years. Experience proves conclusively that advice of this character is erroneous, resulting only in diminished chances of cure, increased difficulty in treatment, and adding to the discomfort of the child.

The writer has frequently begun treatment on infants two weeks old, and in one instance on a child one week old who was the unfortunate possessor of two inguinal and an umbilical hernia. One month should certainly be the limit as to the length of time that should be allowed to elapse before treatment is commenced.

As to the best truss for use on infants, I believe that the experience of any impartial observer will lead him to confirm my own conclusion, that the only one perfectly adapted for such use is the hard-rubber truss. I can hardly conceive of any substance which would be so well tolerated by the infant skin. With no other appliance known to me can such strict cleanliness be observed.

The best style of spring for single hernia is that which crosses the front of the abdomen and passes around the hip opposite to the affected side.

It will rarely be found necessary to use anything but the small oval pad, which should always be located as nearly over the internal ring as possible; much harm may result from the application of a small prominent pad over the external ring, into which it wedges itself and thereby increases the difficulty instead of aiding in a cure.

Respecting cure by surgical procedure it is perhaps sufficient to say that operations upon infants and in early childhood for so-called radical cures are entirely unjustifiable. Fully ninety-nine per cent. of such cases can be cured by milder means, and it is questionable whether the remaining one per cent. would secure a like result by surgical aid.

#### THE EFFECT OF OUR SUDDEN AND REPEATED CLIMATIC CHANGES ON CHILDREN.

From an editorial in the *Boston Med. and Surg. Jour.*—The winter of 1884-'85 has presented such an unusual variety of climatic changes, that it would be extraordinary if the younger portion of our population, with all its sensitive organization should escape manifesting, in some way, phases of disease peculiar to its age and stage of development.

The various catarrhal conditions of the throat, nose, and middle ear, are taking a peculiarly prominent position, not only from their great increase in frequency, but also from the uncommon symptoms which they are producing in other parts of the economy. The general practitioner should be fully alive to the difficulties which may arise regarding the diagnosis of cases where the general symptoms are in reality only of reflex origin, and even when symptoms of aural disease are entirely absent, yet the seat of reflex irritation may be a catarrhal condition of the middle ear, usually produced by extension from the pharynx and posterior nares.

At a season when, besides catarrhal affections, we are witnessing an increase in acute of bronchitis, lobar and broncho-pneumonia,—the latter disease often for days absolutely giving nothing distinctive of its presence by means of physical signs, but only presenting a quickened respiration, with increased action of the *alæ nasi* and a heightened temperature,—it is of the greatest importance to recognize the fact, that exactly the same symptoms may be caused by inflammation of the middle ear developing slowly, and, in fact, no manifestation of its presence appearing until the membrane tympani has been perforated.

Thus, children have been known to lie in an unconscious condition for days, with all the appearances of cerebral disease, and yet consciousness has been entirely restored on the occurrence of perforation of the *membrana tympani* with a purulent discharge.

In young children especially, subjected to the influence of a winter like the present one, it is very noticeable that catarrhal tonsillitis may occur with absolutely no local symptoms, the infant or child, perhaps, showing merely a mild constitutional disturbance, characterized by a slight rise in temperature and loss of appetite. These slight variations from health to disease are seldom thought by the parents to be of sufficient importance to require a physician at the outset of the trouble, and it is only when attending other members of the family, or when more marked symptoms arise, such as drowsiness, quickened respiration, or cough, that the medical attendant has an opportunity of examining the child.

As a summary then of observations which have recently been made on large numbers of infants and children subjected to changes from an intensely cold dry atmosphere to a moist warm one, within a period often of a very few hours, particular attention should be given to an examination of both throat and ear—whether special symptoms point to these parts or not—on the ground that catarrhal tonsillitis may occur and run its course in young children without local symptoms, but with the liability of the catarrhal condition extending and producing serious reflex symptoms elsewhere. Also, the great importance becomes apparent of a more exact knowledge of the

methods of detecting aural disease than is usually possessed by the general practitioner, to the end that not only many serious results from overlooking the aural disease may be averted, but also that, when inflammation is evidently present, the mistake may not be made of failing to interpret certain cerebral, laryngeal, and thoracic symptoms as undoubtedly reflex and hence not in themselves of serious import, provided that the disease of the ear can be controlled.

#### THE DIFFERENCE BETWEEN THE FALSE MEMBRANE OF DIPHTHERITIC AND THAT OF CROUPOUS LARYNGITIS.

From the *Medical News*, March 14, 1885:—Prof. VIRCHOW has recently taken occasion, before the Berlin Medical Society, to express himself pointedly upon the difference between the tracheal membrane found in croup, and the so-called false membrane in diphtheria of the fauces. The former is a true fibrinous membrane found on the surface of the trachea, and, under favorable circumstances, can be expectorated. The latter is something altogether different. It is a necrotic surface which gradually separates itself, not by a process of simple exfoliation, but by ulceration. Diphtheritic, unlike croupous membrane, can never be forcibly separated from the fauces without leaving a raw surface of greater or less depth. Moreover, cases of diphtheritic bronchitis extending even into the parenchyma of the lung have been observed, in which the false membrane consisted of a necrotic layer penetrating the tissues to a varying depth, instead of the usual croupous process attended by the presence of the superficial easily-separable false membrane.

As to the question of infection, Virchow held that while we have not yet been able to cultivate the parasite of diphtheria, it is true that the diphtheritic focus, let it be as small as it will, is full of small granules, which he does not hesitate to regard as parasitic organisms although he formerly regarded them as exudation granules. Certainly they can be very easily inoculated. To prove this one has only to introduce them upon the surface of the mucous membrane, or on a wound in it, when there promptly succeeds a process in which similar granules are invariably present, just as is the case with other forms of parasitic inoculation. These granules are entirely wanting in the true croupous membrane.

For these reasons he considers the two to be totally different processes. He believes, however, that the diphtheritic process, if quite superficial, may also be accompanied by a fibrinous exudation, but not when deep-seated, because the blood-vessels of the mucous membrane are entirely occluded so that circulation, and therefore exudation, is impossible.

When the diphtheria, therefore, is superficial, the two processes are identical, so far as the formation of false membrane is concerned, but the moment the diphtheria is deeper they again differ, because the exudation ceases.

#### THE TREATMENT OF WHOOPING-COUGH.

By JOHN M. KEATING, M.D., Visiting Obstetrician and Lecturer on the Diseases of Women and Children, Philadelphia Hosp.

From the *Medical News*, February 28, 1885:—If whooping-cough be analyzed, it is found to present two elements: One is the catarrhal element, which, of course, affects the mucous membrane; the other is the nervous element, and is very distinct, and it is this that gives rise to the paroxysms. The latest authorities believe that whooping-cough is a specific disease due to the presence of a microscopic parasite, entering by means of the mucous membrane of the air-passages. Some of the facts pointing in this direction are that it is one of the most contagious diseases of childhood; it runs a definite course, it occurs at all times of life, but one attack almost certainly protects from another.

As regards treatment, if let alone, mild whooping-cough usually ends in recovery, unless one of the complications supervene. Previous to the last five or six years, the treatment has consisted almost entirely in the use of anti-spasmodics. It was considered that the disease chiefly affected the nervous system, and therefore such remedies as *asafoetida* and *belladonna* were

employed, associated with external counter-irritation. Recent investigations have shown the presence of the supposed whooping-cough germ, and this has led to the treatment with agents designed to kill the germ.

It has long been the custom to send children suffering with whooping-cough to the vicinity of gas-works, and this has been of service. The relief can probably be attributed to the presence of tar; the use of carbolic acid now does this.

We shall begin the study of the treatment of this affection by considering the influence of oxygen. In Germany, the inhalation of oxygen has been recommended especially by Niemeyer, and is said to be valuable. Here we use oxygen in the form of fresh air. Strange to say, that although air is considered so beneficial in this disease, I find, in looking over the mortality tables, that the death-rate in the Southern States is as great, if not greater, than it is in the Northern States. This is probably due to the fact that the large majority occurs in rickety and cachectic children, and that the children are often exposed to inclement weather, inducing complications. At the same time, the good effect of the soft balmy air of the sea, air saturated with moisture and the chlorides, is undoubted. The paroxysms are diminished in number and intensity, and the complications are warded off.

The next agent to which I shall refer is the steam spray. In some hospitals an attachment is made to the steam heaters, so that a room can be filled with steam. The atomizer is useful for the application of medicated solutions to the larynx, of which there are several that may be employed. Carbolic acid is an extremely valuable one. The good effect of the carbolic acid is probably due to the direct action of the remedy on the mucous membrane of the larynx. Dobell's solution is perhaps the best means of applying this drug. It may be prepared according to the following formula:

R. *Acidi carbolici* (cryst.), grs. liij; *sodii biboratis*, *sodii bicarb.*, ʒʒ grs. xx; *glycerinæ*, ʒ j; *aquæ*, ʒ v.—Solve.

This can be used with the spray, and diminishes the tenacity of the mucus, favors its expulsion, and exerts a beneficial action on the paroxysms.

Thymol is certainly a valuable agent in this affection. It is a powerful antiseptic, second only to corrosive sublimate, and is supposed to act directly on the germs. The following prescription can be used with the atomizer:

R. Thymol, grs. xv; *alcoholis*, ʒ iiij; *glycerinæ*, ʒ ss; *aquæ*, ʒ xxxiv.—Solve.

Corrosive sublimate, which is now used for almost everything, has also been applied here in the form of the spray. This is a dangerous drug to put into the hands of an unexperienced person, and as we have so many other useful remedies for this affection. Listerine I have used extensively with good results in the treatment of whooping-cough. I employ it in the strength of one drachm to two ounces of water, with an ordinary hand atomizer. I direct the nurse to apply it a dozen or more times a day, and I find that little children, even babies, do not object to it. To it I add tincture of belladonna, potassium carbonate, or ammonium bromide, as the case may demand. Probably if it were not for the great expense of the drug, the hydrochlorate of cocaine would be valuable in these cases. I have used a spray of the fluid extract of coca with, I think, good results.

When the paroxysms of whooping-cough become very violent, the inhalation of a few drops of ether is to be recommended. If at the same time the child is turned on its stomach, the mucus will escape by the mouth and the paroxysm will be relieved.

The severe paroxysms of this affection are usually brought about by the accumulation of thick, tenacious mucus in the larynx, and emetics act by bringing this away. The emetics ordinarily used in this affection are ipecac, alum, and the sulphate of copper, the latter being recommended very highly by Trousseau. Alum is probably the best.

It is stated by certain authorities that the disease can be cut short by such remedies as belladonna, bromide of potassium, and sulphate of quinia. I would place belladonna first of all. This has been used for a long time in the treatment of whooping-cough. It must be borne in mind while using this drug that children stand a proportionately larger dose than adults.

After belladonna come the bromides, which are quite useful. They exert a local effect on the mucous membrane of the larynx, and also have a sedative action on the nervous system. The bromides of ammonium, of potassium, and of sodium are those most frequently used.

Chloral is also very valuable in these cases, and it may be given at night in order to enable the child to rest, or it may be given in a smaller dose several times a day. For a child one year old, the dose would be two grains at bedtime, or one grain repeated three times a day. My own opinion is, that it is only in old cases, in which the heart has suffered strain, that any dangerous effects need be apprehended from this remedy.

Hydrobromic acid has also been found of service, for it acts like the bromides, and has the effect of drying up secretion. It is frequently used for this purpose in old cases of chronic bronchitis and bronchorrhœa. The dilute hydrobromic acid may be given in ten or fifteen drop doses every two or three hours.

It has been found by experiment than when quinine is used it must come directly in contact with the mucous membrane of the larynx. It has been applied by means of a powder containing the muriate or sulphate of quinia with bicarbonate of sodium and powdered acacia, which is blown into the larynx through a quill. My own plan is to give it suspended in the syrup of yerba santa, which is one of the best vehicles for disguising the taste of quinine. It is necessary to use a less soluble salt of quinine; for if the bisulphate is employed, an extremely bitter mixture will be the result.

The following formula may be used:

R. Quinæ sulph., grs. viij; syr. yerbæ santæ, aquæ, ʒi ʒss. Sig.—One drachm represents one grain.

When given for this disease, the quinine must be pushed to large doses, giving it frequently during the day.

Astringents have also been found to be of service in this disease. For this purpose, alum may be employed.

Murrel, of London, has used *drosera rotundifolia*. A few drops of the tincture are put in a glass of water, and used during the day.

Albrecht has used muriate of pilocarpine, which promotes free expectoration and diminishes the tenacity of the mucus.

Benzoate of sodium has also been employed in doses of two or three grains three or four times a day.

Salicylic acid has been found of service by some. Its beneficial effect is attributed to its action on the mucous membrane.

In Germany, sulphur, rubbed up with a little syrup, is used extensively, and, in fact, in some parts of Germany this is the only treatment employed.

Lastly, I speak of counter-irritation. This is an important measure. A well-known application consists of croton oil, oil of amber, and oil of cloves. These oils may be mixed with soap liniment or sweet oil and rubbed on the neck or chest three times a day, afterward covering the surface with oiled silk.

### INCONTINENCE OF URINE IN CHILDREN.

By J. LEWIS SMITH, M.D., Prof. Diseases of Children, Bell. Hosp. Med. Coll., N. Y.

From an abstract published in the *Boston Med. and Surg. Jour.*, May 7, 1885:—He mentioned eight causes, two of which might sometimes be present in the same case.

(1) Too great acidity of the urine, causing undue contraction of the bladder. (2) Increased quantity of urine. (3) The presence of stone in the bladder, in which case the incontinence is both diurnal and nocturnal. (4) Abnormal contractile power of the muscular coat of the bladder. The importance of this cause is shown by the fact that belladonna, which controls muscular irritability, is useful in such a large number of cases of enuresis. (5) Weakness of the muscular fibres constituting the sphincter of the bladder. This is rare in children in good health, and Dr. Smith gave an account of one case in which it was associated with spina bifida. (6) Reflex action through the agency of the nerves supplying other organs in addition to the bladder. In this class are the cases due to structural disease of the spine,

ascarides in the rectum, phimosis, preputial adhesions, etc. (7) The dreaming of the child that it is in a convenient place for urinating. To this psychical cause attention has been directed by Dr. Roberts Bartholow. That the enuresis is to a considerable extent under the control of the will is shown in cases where the habit has been broken up by the sending of the child among strangers or to boarding-school, where the sense of shame has constituted an influence sufficient for the purpose. Numerous instances are also on record where a flogging has permanently broken up the habit. (8) Malformation of the bladder or its appendages. Dr. Madden has reported the case of a young lady who suffered from a constant dribbling of urine, both by day and night, in which he found, on examination, that there was a malformation of the right ureter, which discharged the urine from the kidney on that side directly into the vulva instead of into the bladder.

#### THE CONTAGIOUSNESS OF SCARLET FEVER.

From an editorial in the *Boston Med. and Surg. Jour.*, April 23, 1885:—The Massachusetts Board of Health, Lunacy, and Charity has just issued a circular on scarlet fever. It emphasizes the fact of the contagiousness of this affection and insists on measures necessary for the prompt eradication of the disease when it appears in a community. The first principle of treatment is isolation: the patient must, as far as possible, be kept by himself, in a room separated from the rest of the house. The sick-room should be thoroughly ventilated. Carpets, upholstered furniture, window-hangings, etc., which cannot readily be destroyed or disinfected, should be removed from the room. The discharges from the throat, nose, and mouth of the patient must be put in a vessel containing a strong solution of some disinfectant. Pieces of soft cloth may be used instead of pocket handkerchiefs and then at once burned. Cleansing gargles for the mouth should frequently be used, such as chlorinated soda or permanganate of potassium. Carbolic acid or bichloride of mercury may be added as a disinfectant to the slops and to the water in which the patient has washed or bathed, before throwing it out. If cosmoline, or sweet oil with a couple of grains of camphor to the ounce, is used for anointing the skin, the scales of epidermis (the principal seat of the contagion) are prevented to a considerable degree from escaping freely into the air; a warm bath daily is also useful for the same purpose. The bedclothes, towels, etc., when diseased, should be placed in a hot disinfectant solution (five ounces of sulphate of zinc and two ounces of common salt to a gallon of water) and boiled for a couple of hours.

Attendants on the sick should be as few as possible, and should not communicate with other persons any more than cannot be helped. Clothes used in the sick-room should be boiled before being used elsewhere.

After recovery the patient should not mingle with other persons, use lounges, carriages, public rooms, etc., until all roughness of the skin has disappeared, and until he has taken warm baths for several days.

These sanitary rules are dictated alike by experience and enlightened views as to the causation of the epidemics.

#### NIGHT-COUGH IN YOUNG CHILDREN.

By ALEXANDER W. MACCOT, M.D., Surg. to Throat and Nose Department of the Philadelphia Dispensary, etc.

The author concludes a paper published in the *Medical News*, Feb. 28, 1885, as follows:—It is a well-known fact that a drink given to the child will often cause a cessation of the paroxysm, the fluid simply pushing downward the exciting foreign body. This clinical fact gives us the clew to the successful management of these troublesome cases. If the nasal passages are thoroughly cleansed before the child is put to bed, the night will probably be uninterrupted by this irritating cough. If the discharge accumulates in the nasal passages or upper pharynx during the night and gives rise to a paroxysm, it is a simple procedure to cleanse the nasal chambers, and at once relieve the symptoms. Treatment can be most effectively carried out by means of a spray composed of an aqueous solution of an alkali. By its use these cases need no longer be harassing to either practitioner or patient.

## ADDENDA.

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### HYDROCHINON.

Dr. F. P. KINNICUTT, of New York (*Medical Record*, May 30, 1885), gives a report of the use of this new antipyretic with the following conclusions based on hospital cases. (1) That in hydrochinon we possess a new and most efficient antipyretic. (2) That its use is apparently unattended with any injurious effect. (3) That the antipyretic effect of single doses is comparatively temporary, resembling in this respect that of kairin, thallin, and antipyrin; that the maintainance of moderate temperatures in hyperpyretic conditions can be safely obtained, however, by repeated doses. (4) That while apparently without effect in arresting a specific disease-process its employment is conservative and productive of a marked amelioration of many of the symptoms incident to high temperatures. (5) That with our as yet limited experience with the drug, it should be given prudently and its effects carefully observed.

Single doses of fifteen to twenty grains by the mouth were found to be the most efficient mode of administration and amply sufficient to produce the effects described. He is inclined to believe that the contra-indications to its employment must be exceptional.

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### IRREGULAR MANIFESTATIONS OF MALARIA.

Dr. L. EMMETT HOLT, of New York (*Medical Record*, May 28, 1885), has been rarely willing to make a positive diagnosis of malaria unless at least two of the following conditions were present: (1) Periodicity in the symptoms; (2) Prompt curability by quinine; (3) Enlargement of the spleen. He has placed these in what he regards as the order of their importance.

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### UNUSUAL MANIFESTATIONS OF MALARIA.

Dr. ANDREW H. SMITH, of New York (*Medical Record*, May 30, 1885), defines malaria as a peculiar poison of telluric origin, whose typical action is manifested by periodical accessions of fever followed by intermissions or remissions. The cases in which fever is absent, or at least is a wholly subordinate factor, are so numerous that we cannot insist upon it as necessary in any given instance. Periodicity is a much more reliable test of malarial influence. Indeed, if we leave chronic malarial cachexia out of view, he does not believe that malarial poisoning can be positively made out in any case in which periodicity is wholly absent.

On the other hand, while the absence of periodicity is strong negative proof, its presence does not afford equally strong positive evidence; for example pyæmia and hectic fever.

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### TWISTING OF THE CORD ABOUT THE NECK OF THE CHILD.

The editor of the *Weekly Med. Review* (Dep. Obs. and Gyn.) directs attention to the propriety, in cases of coiling of the cord about the neck of the child so as not only to delay labor but even result in the death of the new born, and in which it may prove deficient to relax the loop and slip it over

the head, of cutting the cord and either tying, clamping with the forceps or calling the assistance of nurses or friends to hold the coil while it is cut, and deliver the child in this way. A life may often be saved by adopting this course. Care must be taken to exercise compression of both ends of the cord.

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#### CYSTITIS.

Dr. N. WREST, of Detroit, Mich. (*Medical Age*, May 25, 1885), reports cases of cystitis, or catarrh of the bladder successfully treated by injections once or twice daily of the distilled extract of hamamelis diluted about one-half in warm water. In the meantime the patient took a mixture of buchu, uva ursi and nitre, and the bladder was kept empty with a catheter.

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#### BOILS.

In an editorial article in the *Medical Age*, May 25, 1885, we take the following graphic description of a boil, as recently set forth in a Kansas paper: They are generally very lively and playful at night, and it is very funny to see a chap with a good large one prospecting around his couch for a place where his boil will fit in "without hurting it." Boils tend to "purify the blood," strengthen the system, calm the nerves, restrain profanity, tranquilize the spirit, improve the temper and beautify the appearance.

They are good things for married men who spend their evenings away from home, as they give them an opportunity to rest their night keys, and get acquainted with their families. It is said that boils save the patient a fit of sickness, but if the sickness is not best to have, it must be an all-fired mean thing.

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#### THE BEES AND APOLLO.

Once upon a time the Busy Bees were gathering honey from a flowery field on famed Hymettus. Suddenly, one Bee was heard to buzz much more loudly than the rest of his companions, who, upon listening, heard that he had found a new process for extracting a superior Honey of remarkable medical properties. He had also at the same time invented a very ingenious way by which he could with Comparative Ease make his Buzz sound four times as loud as that of the ordinary Bee. By means of these inventions he soon disposed of large quantities of Honey at a High Price. But one day Apollo, who was experienced in the matter of Honey and its medical properties, came that way seeking some good sample for the use of his friend Diana who was a little ill. He looked at the new preparation, which was put up in soft capsules, and called Honeyine, and at another kind which was put up in chocolate tablets and called Honeyidea: He also listened to the new Buzz. "I think," he said, finally, "that the Buzz is much more wonderful and effective than the Honey; I will take it to Diana, who is fond of buzzing."

Some days later, Æsop, on hearing this story, remarked that the Moral which he would add was that the Art of Advertising a new medicinal preparation is of more importance than the Art of making it.—*Boston Med. and Surg. Jour.*

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#### APPARENT INSUSCEPTIBILITY TO SYPHILIS.

From the *N. Y. Med. Jour.*:—Dr. J. Williston Wright related (N. Y. Clin. Soc.) the case of a man who became infected with syphilis through a fissure of the lip, had secondary symptoms, and put himself under treatment. Two years later he married a girl fifteen years old. In due time five children were born, and all the time the man presented fresh manifestations of the disease, but the wife and all the children had remained healthy, except that one of the children had died of pneumonia.

Dr. E. G. Janeway had seen reason to think that there were some persons who were insusceptible to syphilis.



## COUNTER-IRRITATION IN THE BRONCHITIS OF CHILDREN.

The value of counter-irritations in bronchitis and severe colds is very great, but it only seems necessary here to call attention to an old, but almost forgotten remedy, the oil of amber, as being especially valuable in the treatment of bronchitis of young children, associated as it so often is with marked nervous disturbance and a tendency to collapse. The oil diluted with from one to three parts of sweet oil applied to the chest as a sort of stupe (upon saturated flannel) sometime acts very happily in allaying nervousness as well as internal congestion.—(*H. C. Wood in the Therapeutic Gazette.*)

## SALICYLATE OF CHINOLINE IN AURAL DISEASES

Dr. CHARLES H. BURNETT, of Philadelphia, (*The Polyclinic*, May 15, 1885), finds that this remedy, when used undiluted, almost invariably causes burning and pain in the ear, and therefore he employs it in combination with finely powdered boric acid, one part of the salicylate to sixteen of the acid. The greatest efficiency of the drug, in the above combination is seen in the treatment of the otitis externa diffuse, caused by the growth of the fungus *aspergillus* in the canal and over the dome-membrane. Cleanse the auditory canal by syringing with tepid water, and swabbing with absorbent cotton upon the cotton-holder, and then blow a small charge of the compound powder into the fundus of the canal and over the membrane tympani.

## HOW SHALL WE FEED THE BABY?

Dr. SAMUEL S. ADAMS, of Washington, D. C. (*Archives of Pediatrics*, May 15, 1885) says, every case of infant feeding must be regulated by its own indicated requirements. There is no uniform rule applicable to all. Each must be studied carefully and that mode of treatment must be adopted which proves best suited to it. I have no special brand of food to extol nor fantastic process to recommend. I have used several of the standard foods with apparent benefit, while further trials in other cases led to alarming failures. I have used peptonized and pancreatized milk with good results in a few cases, but with bad results in many more.

The most satisfactory general rule I have found is to secure good sweet milk from a country dairy, delivered twice a day, if possible. As soon as it is delivered pour on the requisite amount of boiling water to dilute it to suit the age of the infant; put this in the refrigerator to be used when required. To a very young infant give the bottle every two or three hours; as the child advances increase the quantity and the interval. Do not permit the bottle to be used as a soothing apparatus; when thus employed it does harm. Never let it sleep with the nipple hanging to its lips. With every feeding add the proper quantity of lime water (use this form of alkali, otherwise the friends will stop it lest it eat the lining of the stomach, though harm is usually traced to its stoppage). When the child is through feeding throw away the remaining milk; never allow it to stand in the bottle. Scald the nipples, tubes and bottles and then let them lie in a solution of soda until the next meal. I adopt no particular form of feeding-bottle: the simplest and the most conveniently cleansed is always the best. Above all things avoid experimental medication; more children die from excessive drugging than from want of medicine. With this for the basis of treatment, given ordinary intelligence and reasonable professional skill in resource and judgment in application, and I believe hundreds of cases now lost would be saved.

## THE USE AND ABUSE OF PESSARIES.

The *Maryland Med. Jour.* (May 80, 1885) says that the pessary is designed to correct a false position, or to give support to an organ which lacks the natural support. Its application is based upon strict mechanical principles, and when these principles are enforced the mechanical effect is usually secured. The pessary should no more be discarded from use than the frac-

ture box or splint, but its employment should never be undertaken by one who does not understand how to use it, any more than that a splint should be adjusted by a tyro in surgical knowledge. Fractured limbs are almost daily maltreated and maladjusted by men who fail to understand the methods of treating fractures, and at the same time displaced uteri are daily maltreated and maladjusted by men who do not understand the simple method of using a pessary. To condemn one mechanical appliance is as just and as logical as to condemn the other. They both do infinite harm or good according to the intelligence of the man who uses them. The man who fails to observe the beneficial results which follow the careful and intelligent use of the pessary, in our opinion, has never had an experience, or else does not know how to use one.

That the pessary may do infinite harm we must admit; so may the splint; so may opium, strychnia, or any other valuable agent. The value of the appliance resides in its intelligent application; this is true of every drug employed.

#### COCAINE MIXTURE FOR RELIEF OF COUGH AND VOMITING IN CHRONIC PHARYNGITIS.

JAHN, in the *Gazette Medicale de Paris*, recommends the following formula for the relief of the cough and vomiting of chronic pharyngitis:

R. Cocaine, gr. iss.; glycerine, f 3 iv.; aquæ dest., 3 ij; acidi carbol., gr. ʒ. M. S.—Apply morning and evening with a suitable brush.—*Med. News*.

#### INFECTION OF SCARLET FEVER AND MEASLES.

A discussion was recently held on this subject (*Medical Record*, May 30, 1885) in the Section on Practice of the N. Y. Acad. of Med.: There was a diversity of opinion concerning the liability of physicians conveying the poison of these diseases from one person to another. Under these circumstances the healthy person should receive the benefit of the doubt, and the physicians should adopt the usual precautionary measures when attending patients sick with either scarlet fever or measles.

The question whether the poison of scarlet fever had ever been conveyed to the lying-in woman was also raised, and it was not answered definitely. It was the opinion of one Fellow that the danger in this direction had been very much overestimated. Here again the lying-in woman should receive the benefit of the doubt.

Dr. L. Emmett Holt referred to an article published in March last in the *Glasgow Medical Journal*, by Aikman, in which he reported an epidemic of measles in the island of Guernsey, where the disease had not prevailed for many years. Three or four thousand cases occurred, and among these was noticed a striking immunity among lying-in women throughout the entire epidemic.

#### THE TREATMENT OF SCIATICA.

The *Boston Med. and Surg. Jour.*, in an editorial article, directs attention to Debove's new method of revulsion by *congelation*. To this end he has had recourse to chloride of methyl, which is readily obtainable in commerce, and with which one may produce a speedy refrigeration. Debove says: I practice with this agent, using for the purpose a siphon bottle furnished with suitable stop-cock and beak, pulverizations along the disease nerve, directing the spray especially upon the *points douloureux*. This spraying ought not to last longer than a few minutes. It is much less disagreeable than the actual cautery, and (what is more important) *it is followed by instantaneous disappearance of the pain*. Ordinarily one séance suffices to cause the pain to completely disappear; sometimes, nevertheless, a second séance is necessary; but always after the first séance the pains are considerably lessened. When you prolong the spraying a little too long, you produce vesication.

## DIET AND DYSPEPSIA.

It is not surprising to find that directly antagonistic views to Dr. Flint, as to diet and digestion, are held by Sir Henry Thompson. In nine cases out of ten, says Sir Henry, in a recent article in the *Nineteenth Century*, dyspepsia is simply the result of a stomach trying to digest what it can't. All that a person needs, then, is to select what agrees with him, and he has but little trouble with dyspepsia. In other words, if the chronic dyspeptic will diet himself, he can generally live as comfortably as any one. This is so obviously the correct view that it needs little argument for its support. The modern stomach has become a somewhat fastidious organ. It has in many cases to be treated gingerly—we do not speak in an official sense. Thousands of men go through life, examples each day of some prandial self-abnegation. Every now and then they try to teach the stomach wider and more catholic views, but the viscus is obstinate, and the owner is forced back to his Spartan regimen. "For most men," continues Sir Henry, "dyspepsia is the penalty of conformity to the eating habits of the majority; and a want of disposition or of enterprise to undertake a trial of simpler foods than those around them consume probably determines the continuance of their unhappy troubles. I have for some years past been compelled, by facts which are constantly coming before me, to accept the conclusion that more mischief in the form of actual disease, of impaired vigor, and of shortened life, accrues to civilized man, so far as I have observed in our own country, and throughout Western and Central Europe, from erroneous habits in eating than from the habitual use of alcoholic drink, considerable as I know the evil of that to be."—*Medical Record*, June 6, 1885.

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 HEPATIC DISORDERS, FROM A BRIEF TREATISE ON  
THERAPEUTICS.

The functions of the liver and kidneys are closely linked together; and in those derangements where the urine has a thick sediment and the bowels are disordered, the old-fashioned doctor, who shook his head and oracularly uttered, "Liver!" was not such a fool as it has recently been the rule to regard him. First, cut down the amount of albuminoids eaten or drank, in order to reduce the demand upon the liver; then sweep away the waste from the blood by a pill at bedtime:—*R Pulv. pip. nig., grs. ij; pil. cal. col. co., grs. iij;* and in the morning: *R Sodæ pot. tart., 3j; sodæ sulphatis, 3ss; tinct. zingiberis, 3ss; inf. gentian, 3j;* with an equal quantity of boiling water, so as to make the draught as hot as can be comfortably borne. Let this be done twice or thrice a week till the tongue is clean. When that is done, give the *R Sodæ sulphat, 3i; sodæ pot. tart., 3ss; tinct. nuc. vom., gtt. vj; inf. cascariillæ, 3j;* ter in die; before meals, and the pill twice a week.

If there be general asthenia, do not proceed to give iron until the tongue is thoroughly clean, the water clear, and the appetite good; and then commence with two or three drops of the dialysed iron once a day after food.

In other cases, where there is only slight constipation, with deposits in the urine, especially after meals, give the old-fashioned dinner pill:—*R Pulv. ipecacuanha, grs. j; pulv. capsici, grs. ss; ext. cinchonæ, grs. iij; pil. at. et myrrh, grs. j;* every day after dinner. It will be found very efficacious. If this dinner pill does not act sufficiently, give the morning laxative twice or thrice a week, so long as the bowels require it.

Then, as to the union of laxatives with tonics, it is well often to combine these two agents. In convalescence, tonics never act genially if there be not at the same time regular and sufficient action of the bowels; so, add sulphate of magnesia or sulphate of soda to the tonic. *R Mag. sulphat, ʒj; vel sodæ sulphat, 3j; quin. sulph., grs. j; ac. phosp. dil., ʒxv; inf. gentian, 3j;* ter in die; before meals, and ten minims of dialysed iron after dinner daily will usually give good results, or. *R Mag. sulphat, 3j; tinct. fer mur., ʒx; liq. strychniæ, ʒiv; inf. quass., 3j;* ter in die; forms a less expensive form of tonic, of much utility.

But in this use of laxatives, with occasional mercurials, avoid the pitfall of letting the patient eat with unlicensed abandon.

Now, in conclusion, let me tell the student to strive to see what are the indications for treatment; what, in this case, calls most imperiously for attention. He is taught too exclusively, at present, to look at disease from a dead-house point of view. To make a diagnosis which would be corroborated in the dead-house is the great matter! Yes, so it is at a medical school; but in practice for yourself, remember that a living, grateful patient, who has got well under your care, is worth far, far more to you than any amount of accurate diagnosis—which, so far as other persons and their opinions are concerned, is as voiceless to further your interests as the tombstones in the churchyard which mark your failures.—*J. Milner Fothergill, M.D.*

#### THE TREATMENT OF CARBUNCLE WITHOUT INCISION.

Dr. L. DUNCAN BULKLEY, of New York (*Amer. Med. Ass'n*, April, 1885), recommends the following: (1) Avoid any irritation, as pressure, blows, etc. (2) Avoid warmth and moisture, as the poultices. (3) Avoid incision. (4) Do not use stimulants. (5) Protect the inflamed parts with an ointment made as follows and spread at least one-third of an inch thick.  $\mathcal{R}$  Ergot. fl. ex., 3 ij; zinci oxidi, 3 ss; unguent. aq. rosæ, 3 ij. M. Cover with cotton-batting, to prevent blows or injury. (6) Give sulphite of calcium  $\frac{1}{4}$  gr. every two hours for its effect upon suppuration. (7) Employ good, nutritious food, and fresh air. (8) A sedative, if desired, and occasionally the laxative and refrigerant tonic as above.

The advantages are: (1) Short time required for recovery. (2) Cessation of pain. (3) No scar. (4) No operation. (5) No detention from business.

#### MEDICATED SOAPS.

Dr. JOHN V. SHOEMAKER, of Philadelphia (*N. Y. Med. Jour.*, June 6, 1885) says, at the conclusion of a paper on this subject, that soap, especially the medicated, as has been shown, was very often valuable in the treatment of the various diseases of the skin, provided it was properly and judiciously used. It was powerful to do good, and equally so to effect harmful results. The greatest care and the utmost precautions, as had already been pointed out, should always be exercised in applying it to a diseased surface, and too much must not be expected for soap to accomplish. The manufacturer, the merchant, and too often the physician, maintained that this or that medicated soap would remove or cure certain skin diseases, whereas on trial they would frequently be found to utterly fail. Soap, therefore, as a remedy *per se*, seldom cured cutaneous affections, but as an adjuvant it was one of the most valuable agents that we possessed.

#### TINNITUS AURIUM.

Dr. Atwood (*Weekly Med. Review*), reports the following personal observation. He is perfectly well, and has perfect hearing. Yet for the past twelve years the tinnitus in his ears has been almost constant. He has discovered the cause and is able to prevent it at will. He is an inveterate user of tobacco, and has determined that the tinnitus depends upon his use of tobacco. Smoking produces a greater effect than chewing. If he stops the use of tobacco the noise in his ears stops, but it recurs when he again uses the tobacco.

#### TRAUMATIC GASTRIC FISTULA.

Dr. E. F. BRUSH, of Mt. Vernon, N. Y. (*Medical Record*, June 6, 1885), reports a case, with autopsy, in which a traumatic gastric fistula was found opening into the pancreatic duct, and the history indicated that it was established forty years previous to death.

# QUARTERLY EPITOME

OF

## AMERICAN PRACTICAL MEDICINE AND SURGERY.

WESLEY M. CARPENTER, M. D., Editor.

Two important events have transpired during the last quarter. The first pertains to a topic which has seriously agitated the medical profession during the last three years. This agitation has led to the following declarative interpretations made to certain portions of the Code of Ethics by the American Medical Association, and clothes the rule with a flexibility which, hitherto, it had been supposed it did not possess.

The interpretations are entitled to careful consideration, and, as the language of the report is perfectly plain, they need no special comment. They are sufficient to satisfy many who have entertained even more liberal views, and they may prove instrumental in bringing the British and Russian empires into amicable relations. It was unanimously resolved that the interpretations be added in all future publications of the Code.

1. *Resolved*, That clause first, of Art. IV, in the National Code of Medical Ethics, is not to be interpreted as excluding from professional fellowship, on the ground of differences in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

2. *Resolved*, That it constitutes a voluntary disconnection or withdrawal from the medical profession proper, to assume a name indicating to the public a sectarian, or exclusive system of practice, or to belong to an association or party antagonistic to the general medical profession.

3. *Resolved*, That there is no provision in the National Code of Medi-

cal Ethics in any wise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations cannot be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code.

But no such emergencies or circumstances can make it necessary or proper to enter into formal professional consultation with those who have voluntarily disconnected themselves from the regular medical profession, in the manner indicated by the preceding resolution.

The second important event was the unworthy and unjust action taken by the American Medical Association, with reference to the work already done by the committee on organization of the next International Medical Congress.

If the organization, as it has been reported and published, remains undisturbed, the success of the Congress is assured, for the influence of the ultraists and grumblers will be *nil*. On the other hand if it is undertaken to revise the work already done, the success of the Congress will be jeopardized if not destroyed.

While there may be reason for grumbling with reference to distribution of honors, it should not be overlooked that a like organization was never completed without giving rise to some dissatisfaction. According

to the announcement already made, and scattered broadcast, the American medical profession has a representation of which it need not be ashamed, and no fears need be entertained that the supervision and the completion of the work will not be performed in a manner that will be satisfactory to all who may be concerned.

The *American Cliniatological Association* held its second annual session in this city the last week in May.

The prime objects of the organization is to study, develop, and systematize the natural health resources of the United States.

That our country possesses as good and as many resources of this kind as can be found in any part of the world, is conceded by those best qualified to give an opinion on the question, but that they lack the preliminary work and development essential to make them what they may be is equally evident.

No more commendable work can be undertaken. As our knowledge now stands, the profession, as a rule, has no reliable data by which it can be governed in prescribing change of climate and mineral waters. With the bestowal of an equal amount of labor the profession of this country may be able to offer advantages equal to those so admirably developed in different parts of Europe, and our patients may receive the benefits without the drawbacks incident to an ocean voyage and residence in a foreign land.

It affords us great pleasure to announce that arrangements have been made to continue the publication of the *Index Medicus*, and that the undertaking is in the hands of Mr. George S. Davis, of Detroit, Mich. It is earnestly hoped that the labor will not be in vain.

### BOOK NOTICES.

**A GUIDE TO THE DISEASES OF CHILDREN.** By James Frederick Goodhart, M.D., F.R.C.P., Asst. Phys. to Guy's Hosp., London, etc., etc. Revised and edited by Louis Starr, M.D., Clin. Prof. of Diseases of Children in the Hosp. of the University of Penn., etc. With formulæ. Philadelphia: P. Blakiston, Son & Co. 1885.

This is an eminently practical work, and is well adapted to meet either the needs of the student or serve as a ready reference for the busy practitioner.

It contains over seven hundred pages, and in perusing it we have been particularly pleased with its systematic arrangement and clearness of expression. While containing many original suggestions the author seems also to have possessed the faculty of drawing from varied sources of information a mint of knowledge which he has so thoroughly condensed as to render the subject concise without that uncompleteness usually seen in such attempts. The statements, also, have been made in such a straitforward, unassuming manner as to make them neither dogmatic or uncertain, a style of expression in every way calculated to bring the mind of the reader into harmony with that of the writer.

The author's introductory chapter contains many very pertinent remarks as to dosage and the peculiar methods of examining children.

In the chapter devoted to infant feeding his careful attention to details will certainly be greatly appreciated by the younger members of the profession.

He believes that tracheotomy in diphtheria is a serious operation.

He has much to say throughout the work of the rheumatic tendency as an associate and causative factor in many diseases, especially those of the nervous class. Among the few extreme views held is the statement "and un-

questionably there in a form of nocturnal incontinence which replaces the seminal emissions of the mature organism."

The Appendix formulæ is too suggestive of empiricism to merit especial credit.

The American editor's additions and corrections have been most appropriate and will greatly enhance the value of the work.

**INSOMNIA, AND OTHER DISORDERS OF SLEEP.** By Henry M. Lyman, A.M., M.D., Prof. of Phys. and Diseases of the Nervous System, in Rush Med. Coll., Chicago, Ill., etc. Chicago: W. T. Keener, 96 Washington St. 1885.

A difficult subject treated in an interesting way. Sleep is a fitful visitor sometimes, and what wonder if the writer in studying it should occasionally get near to that border line where dreamland shades the waking hours. Of course to write a book on the disorders of sleep and not give a definition of the condition disordered would be inexcusable, and so the author says that "natural sleep is that condition of physiological repose in which the molecular movements of the brain are no longer fully and clearly projected upon the field of consciousness." We cannot refrain from one or two inquiries just here, and first, what are molecular movements of the brain? Second, what is meant by projected, and third, what is the field of consciousness? Possibly the author means that natural sleep is the physiological condition of unconsciousness. If so, all right; the bone is picked.

The book is printed well upon good paper, and contains two hundred and forty pages divided into chapters on the nature and cause of sleep, insomnia, remedies for insomnia, treatment of insomnia in particular diseases, dreams, somnambulism, and hypnotism. He who reads it will be instructed and entertained.

**THE YEAR-BOOK OF TREATMENT FOR 1884.** Philadelphia: Lea Brothers & Co. 1885.

It is stated that the object of this book is to present to the practitioner a critical review of medicine and surgery by competent authorities. To one who reads these pages it soon becomes evident that the work has been done well, and that the discrimination exercised in the selection of topics has accomplished the end for which the book was compiled. There are many familiar names in the list of contributors, and the fact that they are there is a guarantee of the excellence of the contents.

**CLINICAL STUDIES OF DISEASES OF THE EYE.** By Dr. F. R. von Arlt, Prof. of Ophthalmology in Vienna. Translated by Lyman Ware, M.D., Surg. to the Illinois Charitable Eye and Ear Infirmary, etc., Chicago. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1885. Price, \$2.50.

Valuable as this book is, its value would have been enhanced had the translation been published one year earlier.

It is not a treatise on diseases of the eye, but clinical studies of diseases of the conjunctiva, cornea, sclerota, iris, and ciliary body. The affections studied are chiefly the inflammatory, and particularly with reference to the exciting causes of the morbid processes. The translation is excellent, and it is printed handsomely upon fine paper.

**LECTURES ON DISEASES OF THE NERVOUS SYSTEM, ESPECIALLY IN WOMEN.** By S. Weir Mitchell, M.D., of Philadelphia. Second edition, revised and enlarged, with five plates. Philadelphia: Lea Brothers & Co. 1885.

This keen observer of the phenomena of disease associated with the curious, perplexing and multitudinous phases of human nature presented especially by nervous women has con-

ferred an invaluable benefit on his professional brethren by preparing a second edition. It is not a ponderous tome, but a pithy practical volume filled with intelligent data which will aid the practitioner in solving some of the annoying problems of his professional life.

**URINARY AND RENAL DERANGEMENTS AND CALCULOUS DISORDERS. HINTS ON DIAGNOSIS AND TREATMENT.** By Lionel S. Beale, M.D., Prof. of the Principles and Practice of Medicine, King's College, London, England. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut St. 1885. Price, \$1.75.

This book, without a preface, is published simultaneously with the London edition. It contains in various places descriptions of, or references to microscopical constituents of urine which are elsewhere illustrated. This is unfortunate. The text and the illustrations should be within ready reach of each other, and by preference within the same cover. Whatever Beale writes is well written. The result is that we have a goodly collection of valuable hints and suggestions.

This book without an index, a *grave and inexcusable omission*, contains a mass of information with apparently no effort whatever in the direction of having it arranged systematically.

**THE OLEATES. AN INVESTIGATION INTO THEIR NATURE AND ACTION.** By John V. Shoemaker, A.M., M.D., Lecturer on Dermatology at the Jeff. Med. Coll., etc. Philadelphia: F. A. Davis, Att'y, 1217 Filbert St. 1885.

This little monograph contains the views of the author concerning this group of therapeutic agents, with which the profession has already been made familiar through the medium of medical journals. The book places the material in a condition convenient

for reference, and also gives the author's latest experience on the subject. The author puts himself among those who believe that this class of pharmaceutical preparations is especially adapted to meet certain indications.

**THE SCIENCE AND ART OF SURGERY.** By John Eric Erichsen, F.R.S., LL.D., F.R.C.S. Eighth edition. Revised and edited by Marcus Beck, M.S. and M.B., Lond., F.R.C.S. Illustrated. Vol. II. Philadelphia: Lea Brothers & Co. 1885.

We have already noticed in a complimentary way, the first volume of this work on Surgery and what was then said is applicable to the second volume of this estimable treatise. What will add to the general value of this volume is the appendix in which are given the latest views concerning antiseptics, and from this it appears that the transition from one agent to another, so often repeated with reference to therapeutic measures, has already become far advanced in England concerning carbolic acid.

We have nothing to offer in the way of criticism; for, while opportunity might be taken to discuss the conclusions of the author on many topics, the general tenor of the work is so conservative and reliable that great care would be requisite lest such an extended review should appear capricious.

**BERLIN AS A MEDICAL CENTER. A GUIDE FOR AMERICAN PRACTITIONERS AND STUDENTS.** By Horatio B. Bigelow, M.D., Sandy Hook, Conn. New England Publishing Co. 1885.

This is a reprint from the New England Medical Monthly, and with the map appended will doubtless prove very valuable to those who contemplate making a visit to Berlin.



# PUBLISHER'S DEPARTMENT.

## NEWS AND MISCELLANY.

**ALVELOS, THE NEW CURE FOR CANCER.**—The plant commonly known by the name of alvelos belongs to the euphorbiaceæ, and is indigenous to Pernambuco. Dr. Velloso, of that province, states, in a communication to the *Journal de Recife*, that a magistrate, who was suffering from epithelioma of the face, and who had returned to his estate despairing of relief, was entirely cured of his disease by the topical application of the juice of the plant. On the strength of this report Dr. Velloso tried the remedy in the case of canceroid of the nose, and in one of epithelioma of the lip, with the result that the first patient was completely cured in forty days, and the second in less than two months. These results, he thinks, justify a trial of the remedy, especially in uterine cancer. The action of the juice of the plant is irritating, producing a spreading dermatitis without much pain, and the application of the cut stem or the juice of the fresh plant to the diseased part, is said to result in the destruction of the morbid tissue, which is replaced by healthy granulations, doing the work, in fact, of the chloride of zinc paste.—*New York Med. Times*.

**CONCENTRATED PEPSIN.**—Wm. R. Warner & Co.'s Concentrated Pepsin in Powder is a preparation much appreciated by all who have occasion to use pepsin in scales, and especially where a concentrated article is required. It forms a clear solution, retains a pulvulent condition, and mixes with other substances. The use of this preparation in cases of ulcers of various parts of the body—particularly those of the stomach—has given very satisfactory results, from its power of dissolving albuminous products. This pepsin has been found useful as an application to diphtheritic ulcers; also for indigestion of children, who take it without much trouble. Again, this preparation is found very useful in nervous vomiting and diarrhœa. I find this pepsin has many more times the power of digestion than the saccha-

rated form. The advantages of Warner & Co.'s Pepsin—as indeed of all their preparations—are that it is uniform and reliable.—*The Va. Med. Monthly*.

**THE POSSIBILITIES OF COCA.**—Willard H. Morse, M.D., of New York, says:—Whatever we may dispose to do in the development of the possibilities of cocaine, we have not to forget that coca has worked out some measure of therapeutical salvation, and that unknown hopes and marked worth reside in the bright and oval-pointed leaf. Botanically of one of the grandest of orders, and chemically complex, coca has a physiological action on heart, and nerve, and life that renders its therapeutical application full of assertions of power. After no inconsiderable experience of a special nature, I am confirmed in the opinion that, as it is impracticable to use the leaf as a masticatory, the preferable preparation is that of a wine. The infusion, extract and tincture do not adequately subserve the active principles.

Theodore Metcalf & Co., of Boston, manufacture with Burgundy wine the Coca Wine, which I unhesitatingly commend, not only as the one reliable preparation, but as well as the most valuable of tonics.—*Medical Gazette*.

**CHLORIDE OF ZINC AS A DISINFECTANT.**—In a recent conversation, Prof. Alfred L. Loomis remarked that chloride of zinc had maintained its long-established reputation as a disinfectant, as was shown in Miguel's classification. Sulphurous acid and chlorine were powerful germicides, beyond question, but their everyday use was impracticable; and the bichloride of mercury, although it might be the most potent of all the agents that were chiefly talked about, was hardly to be considered safe for domestic use. But the preparation known as "Platt's Chlorides" (a solution of the chlorides of zinc, lead, calcium, and aluminium), which he had made use of freely for the past five years, both in his own house and among his

patients, he considered as by far the best for all the sanitary requirements of the household.—*N. Y. Med. Jour.*

**LOCAL APPLICATION OF CASCARA SAGRADA IN CONSTIPATION.**—H. C. Glanville, (*London Lancet*, May 9th, 1885,) in alluding to the fluid extract of cascara sagrada, which he considers the most reliable preparation, says: It acts upon the hepatic secretions and circulations, the whole gastro-intestinal canal, stimulating its morbid condition, and the neighboring glands to healthy action. As a cholagogue it is invaluable. In chronic constipation its action is good, producing full, easy, pleasant stools, without any tormina, tenesmus, or nausea. The liquid extract, combined with the tincture of iodine painted on the hypogastric region, daily, until the bowels are moved easily, has given the same result after repeated trials on patients suffering from habitual constipation. As a remedy for dyspepsia it is superior to many others of its class, being pleasant to take, and producing no nausea.—*The Medical Age.*

**INFANT DIGESTION.**—Horatio R. Bigelow, M.D., of Washington, D. C., in a communication on infant digestion to *The Archives of Pediatrics*, states: I beg leave to append the following from my note-book, as bearing upon this matter:

K. S., colored, five months old, apparently dying of marasmus; vomits frequently; diarrhea, with inability to retain nourishment. Was nursed by mother until two months old; then was fed by bottle on diluted cow's milk. Ordered appropriate remedies, with the formula of infant food as advised by Meigs, in very small quantities. On second day the child was no better. Gave small doses of brandy, burned, with sugar; spice poultice to abdomen. Child continues to fail; entire inability to retain nourishment. At the suggestion of a professional friend, I bought a bottle of Mellin's food and subjected it to a very careful analysis. It seemed to be a close imitation of mother's milk—so that I commenced using it at once. The change was immediate and permanent, and the patient is now a thriving girl of four years. The effect was due to the principle in the food which acted

upon the curd, and albuminoids, and brought the cow's milk into a harmonious relationship with human milk.

**ANGLO-SWISS MILK FOOD.**—Estimated in a cursory manner, human milk contains about 890 parts of water to 110 parts of solid matter; and of this solid matter caseine, fat, and saccharine matter occupy the larger proportion. If milk contains these ingredients in the proper proportion, it is assimilated by the infant, and we have as a result healthy growth and development; but if these constituents are wanting, the child is imperfectly nourished, and easily falls a victim to the many disturbances which accompany dentition. To meet this want several artificial Milk Foods, more or less scientifically prepared, have been introduced to the public, and one of the most desirable is that known as the Anglo-Swiss Milk Food (made at Cham, Switzerland). This Food has been proved to contain all the necessary ingredients for a reliable Food for infants, and having received the highest endorsements from the medical profession in Europe, and in America, may, therefore, be used with perfect confidence by all having the care of young children.—*Medical Press.*

**HYDROLEINE.**—We are sure many in the profession and many out of it have already become familiar with the value of Hydroleine, so long and successfully manufactured by Wm. F. Kidder & Co., 83 John street, New York. Hydroleine has a special advantage over its rivals in the fact that it readily mixes with water or almost any menstruum, an advantage which will be readily appreciated by those who prescribe cod liver oil in the various maladies to which it is adapted. Our personal experience with this preparation has been extensive and in every case highly satisfactory, not only to ourselves but also to the patients for whom it has been ordered.—*Medical Digest.*

**THE BITE OF AN EPILEPTIC.**—In commenting on a case of alleged death from the bite of an epileptic, the *Lancet* says: There is no poison in the bite of a person in a fit, as there is in the bite of a rabid dog. It is, of course, desirable that every care should be

\*taken to avoid the bite of an epileptic, as it is also that of any other excited or enraged creature; but there is not the slightest ground for supposing that worse consequences will follow an injury of this class than one of any other description, if it be equally severe and is attended on the part of the victim by a morbid state of the constitution.—*N. Y. Med. Journal.*

**THE INEBRIATE'S HOME.**—Few institutions designed for the relief and reformation of those enslaved by the use of alcohol, opium or any of the narcotics, have the brilliant history of the Inebriate's Home, located at Fort Hamilton, L. I.

The method adopted by this institution in its treatment of these unfortunates is the humanitarian one, that of the gradual withdrawal or reduction of the drug to which the patient is addicted, thereby securing a minimum amount of suffering and consequently the minimum amount of constitutional injury. That this treatment is successful is evidenced in the annual reports, the percentage of deaths being far less than one per cent.

Among the many advantages of this institution might be mentioned that it is equipped with fine billiard rooms, bowling alleys, etc.; in fact everything that would tend to divert the mind of the patient from himself and conduce to physical and mental restoration; especially would we mention the superior qualifications of the officers in charge, all of whom have made a life study of the subject with which they are engaged.

Dr. James A. Blanchard, Med'l Sup't, will gladly send circulars to any who desire special information.—*Medical Digest.*

**MALT EXTRACT.**—The following is from an article on Malt Extract, by the late Professor L. P. Yandell:—"Maltine, in its different forms, is the only Malt Preparation we now employ, being so palatable, digestible, and easily assimilated. Of its efficiency in appropriate cases there is no more doubt in our mind than there is of the curative power of Quinine, Cod-Liver Oil, the Bromides, and the Iodides. It deserves to stand in the front rank of constructives; and the constructives, by their preventive, corrective, and curative power, are probably the

most widely useful therapeutical agents that we possess."—*Medical Press.*

**JENSEN'S PEPSIN.**—J. J. Caldwell, M.D., of Baltimore, Md., contributes an article on Pepsin, to *Gaillard's Med. Journal*, in which he says:—"The pepsin of Carl J. Jensen, of Philadelphia, is regarded as the standard of pure pepsin. I do not mean for a moment to say that some other preparations may not be as good; but both physicians and pharmacists appear to prefer it, and I only speak from the best standpoint I can obtain. Jensen's crystal pepsin, which has received the name of crystal (not crystallized, as it is often erroneously called) simply from its peculiar glistening, crystal-like appearance, is (without the addition of an acid) perfectly soluble in water, and not precipitated by common salt, therefore a peptone with very great pepsin effect; 'one which is capable of dissolving over five hundred times its weight of hard-boiled albumen.' The property belonging to all other preparations of pepsin, of containing chlorides, is totally wanting in Jensen's.

**PEPTONIZED COD-LIVER OIL AND MILK.**—This valuable form of cod-liver oil is prepared by Messrs. Reed & Carnrick, of New York city. It is a combination of pure cod-liver oil and condensed milk digested, the oil being artificially prepared for assimilation with nature's emulsifier—Pancreatine, instead of gums, alkalies, Irish moss, and water. It will keep indefinitely, having been tested for over a year at a decomposable temperature. It is prepared with milk and also with hypophosphite of lime and soda.—*Med. and Surg. Rep.*

**MENTHOL.**—Prof. Henry Trimble says that "Under the name of 'Peppermint Camphor' and 'Solid Oil of Peppermint,' menthol appears to have been known as early as 1829. Its composition and some of its properties were investigated by Dumas, Blanchet and Sell, and Walter, with the result that they closely agreed on its composition, but differed widely concerning the fusing point. In 1862 Oppenheim described a 'solid oil of peppermint,' from Japan, the product of *mentha arvensis*, and for which he proposed the name of 'men-

thol.'" This Japanese menthol has recently come into great prominence in the United States, through the efforts of Dundas, Dick & Co. introducing it (under the name of Mentholine) in the form of compressed cones, which are admirably adapted for external application, forming a convenient remedy for neuralgia, sick headache, and nerve pains in general.—*Medical Press*.

#### A LIFE INSURANCE PHENOMENON.

—It is not surprising that the business of the Mutual Reserve Fund Life Association should be unparalleled in the history of life insurance, when we consider the results already accomplished, or that its business for the past five months of 1885 should exceed \$27,000,000, and it is not surprising that for the month of May just passed its business has exceeded \$6,000,000, since every head of a family recognizes the fact that life insurance is a necessity and that his duty is to provide those dependent upon him with the protection afforded by a policy of life insurance, or that he should choose the Mutual Reserve Association which affords him such protection.

This association has issued to date over 83,000 certificates of membership, which represents over \$135,000,000 of insurance, making it the phenomenon of the age, and it disburses to the widows and orphans \$2,000 per day.—*The New York World*, June 3.

**COD LIVER OIL AND BRONCHIAL CATARRH.**—Dr. H. G. Bates, of the U. S. Marine Hospital Service, New Berne, N. C., addressing Messrs. Geo. W. Laird & Co., says: Many thanks for the "Oleo-Chyle" received some time ago. I have to say that I find it the most desirable preparation of Cod Liver Oil that it has been my pleasure to prescribe or use during the practice of my profession, now covering a period of 39 years. I have prescribed its use to several of my patients and they invariably speak of it in the highest terms. I have taken it myself for an aggravated attack of Bronchial Catarrh with very gratifying results; further let me add that it is most agreeable to the taste, and is well tolerated by the stomach.—*Med. Times*.

**MURDOCK'S LIQUID FOOD.**—The English War and Navy Department have adopted Murdock's Liquid Food

for their Hospitals. Their orders by Cable this month are for six thousand (6,000) cases. The Murdock Liquid Food Co., Boston, are the sole manufacturers.

We recently visited Mr. A. L. Murdock's "Liquid Food" establishment and saw much of the process, its preparation, and putting it in shape for distribution on its errand of mercy. Cleanliness was scrupulously observed in every step of the process; the method is in strict accordance with science and sound principles; and the product is in every respect what is claimed for it as a thoroughly representative nutritious food, of healing and nourishing properties.

A look through the hospital satisfied us that its merit in restoring health to the puny foundlings under the care of that institution is not overstated. The only treatment was "Murdock's Liquid Food," and they bade fair to obtain as robust health as the most favored. Other cases we have seen in adults quite as marvelous.

The company's new hospital building of four stories, now being erected, will cover 174x120 feet of ground. It will be opened early in spring.—*N. Y. Pharmaceutical Journal*.

**INHALATIONS OF CARBONIC ACID IN WHOOPING-COUGH.**—M. Campardon has recently experimented with this treatment in the case of a child of ten years of age, sick for five months. The carbonic acid gas used was obtained from an apparatus for making seltzer-water, and was slowly inhaled through a rubber tube placed at the nasal orifices. After a few inhalations the cure was complete. M. Campardon insists that the gas should always be charged with vapor of water. The method is very cheap, and may be commonly used on that account.—*Med. News*.

**WHEELER'S TISSUE PHOSPHATES.**—Prof. of Midwifery and Diseases of Woman and Children, University of Bishops College, Montreal, says: After many years' trial I am free to say that I consider the combination of therapeutic agents in Dr. Wheeler's Compound Elixir of Phosphates and Calisaya superior to anything yet offered to the public. In cases of mal-assimilation and general debility its use has given the utmost satisfaction to both myself and patients.—*Canada Press*.

**QUARTERLY EPITOME**  
**OF AMERICAN**  
**PRACTICAL MEDICINE AND SURGERY;**  
**Supplementary**  
**TO**  
**BRAITHWAITE'S RETROSPECT;**

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN  
THE MEDICAL SCIENCES, ABSTRACTED FROM THE CURRENT MEDICAL JOURNALS  
OF THE UNITED STATES AND CANADA.

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PART XXIII.....SEPTEMBER.....1885.

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# PRACTICAL MEDICINE.

## DISEASES AFFECTING THE SYSTEM GENERALLY.

### CHEMICAL VERSUS GERM THEORIES OF DISEASE.

By F. R. CAMPBELL, M.D.

From the *Buffalo Med. and Surg. Jour.*:—In all fields of speculative thought, where demonstration has hitherto been impossible, we observe that hypotheses directly opposite in their tendencies have prevailed among scientists and philosophers. In medicine, the humoral pathology of the Ancients, essentially a chemical theory of disease, was replaced by the vegetable parasitic hypothesis of Vallisneri, Hauptmann, and Linnæus. Then Stahl proposed a purely chemical theory of disease, but this has been followed by the germ theory, brought to its present stage of development by such men as Virchow, Pasteur, Tyndall, and Koch. At present the germ theory has the strongest hold upon both the professional and popular mind.

But there are many honest scientific men who are unwilling to accept, in their present state, the views of the "bacteriologists," based almost entirely upon analogical and *post hoc ergo propter hoc* arguments. The powers of the microscope have almost reached their limit, but organic chemistry is as yet in its infancy.

The germ theory, as adopted by most of its advocates, assumes that there is a specific micro-organism for each zymotic disease; that this micro-organism is capable of reproduction, and always produces similar chemical and anatomical changes in the body attacked. It is assumed that the organisms discovered are morphologically distinct, though it is, in many cases, impossible to differentiate them with our present means of investigation. It is claimed that the existence of microbes as a cause of anthrax, tuberculosis, and, probably, cholera Asiatica, has been demonstrated, and by a perfectly logical deduction we may assume that germs are the cause of all infectious diseases. It is claimed that if a recognized variety of micro-organism is invariably found in the blood or tissues in connection with special disease; if these microbes are capable of cultivation outside of the body; if the products of these successive cultures, on inoculation, produce the original disease, and if, in the body thus inoculated, similar germs are found, it is demonstrated that these germs are the cause of the disease.

In spite of the attractiveness and plausibility of this theory, there are many objections in the way of its acceptance.

1. These organisms are so minute that in the majority of cases it is impossible to differentiate microbes, which, if we accept the germ theory, produce very different results. No one can distinguish the micrococcus diphtheriticus from the micrococcus vaccinæ, nor can the gonococcus be differentiated from the micrococcus urææ, though the former is supposed to produce urethral inflammation, while the latter confines its energies to the manufacture of carbonate of ammonia from urea.

2. It is very questionable if the micrococci of vaccine virus have anything to do with its action. Even filtered vaccine lymph has been known to be efficacious, though this has been denied by some authorities.

3. Bacteria and micrococci are always found on the surface of mucous membranes, and these organisms differ in no respect from those found in disease. According to some authorities, micrococci are always present in the blood of healthy persons. Koloczek, Richardson, Emmerich, Sternberg, and Lauder Brunton claim that even the dreaded "common bacillus" is normally present in the intestines, Brunton proving that they greatly increase in numbers when the nerve supply of the intestine is cut off.

4. It has been proved by Burdon-Sanderson and Cohen that bacteria derive their nitrogen, not from the living tissues of the body, but from ammonia, a product of decomposition, hence we must admit that the decomposition precedes the development of the bacteria.

5. Suppuration will occur when there are no micro-organisms present (Orthmann). On the other hand, bacteria have been found under Lister's dressings when there was no suppuration. Paul Bert and Rosenberger have destroyed all the bacteria in a septic fluid without diminishing its septic character. Griffini has found that saliva and urine, when deprived of their micro-organisms, will produce septicæmia in rabbits.

6. It is claimed by some of the most eminent observers, Buchner, Nügeli, Bastian, Billroth, and Sanderson, that the species of bacteria are convertible, one into another having entirely different properties. To quote from Ziegler: "The researches of Koch and his pupils do not prove that the qualities of the bacteria examined by them are perfectly constant. They only show that the morphological and physiological qualities possessed by a bacterium are retained with some tenacity." We cannot possibly deny the validity of Buchner's experiments showing how the hay bacillus could be converted into the bacillus anthracis, and conversely.

7. If we cannot accept the theory of the mutability of bacteria, it is quite reasonable to suppose that special micro-organisms select special pathological lesions as a favorable culture ground. If this is true, specific micro-organisms will have only a diagnostic significance.

8. These micro-organisms are not uniformly present. Klein states that bacteria are sometimes absent in typhoid fever. The bacillus tuberculosis may be accidental only, for—(a) The contagiousness of tuberculosis is extremely doubtful; (b) Tuberculosis has been induced by the inoculation of irritating substances not containing bacilli (Schotellius, Wood, Sanderson, Formad and Lebert). [A great controversy has been waged on this point, and without conclusive results for either side.—Ed.] (c) The bacilli of other affections, *e. g.*, syphilis, when inoculated in animals, will produce a disease resembling tubercle; (d) Tuberculous deposits do not always contain bacilli, as has been shown by Sternberg, Spina, and Prudden, the last mentioned making six hundred and ninety-five sections from ninety-five tubercles of a tuberculous pleura, using all of Koch's precautions, and failing to discover the bacillus, though he has seen it in other cases. Koch gets over this difficulty by claiming that his bacillus is alone pathognomonic of tubercle. But this is begging the whole question.

9. If we assume that micro-organisms are the cause of all zymotic diseases because they accompany fermentation, we can, with equal propriety, assume that microbes are the source of all obscure reactions in organic chemistry. Furthermore, even if these minute organisms do produce some chemical changes, it is not necessary to assume that they are specific.

10. It is impossible to separate a micro-organism entirely from the medium in which it exists.

11. The specific character of no micro-organism, except, possibly, the bacillus anthracis, has been demonstrated. It seems very probable that the comma bacillus, which now claims so much attention, is not the cause of cholera, for—(a) Dr. Strauss, of the French Cholera Commission, reports that "the shorter and more violent were the fatal attacks of cholera, the fewer were the bacteria found in the intestine." This is the very opposite of what we should find were cholera due to bacteria. (b) Koch, after showing how rapidly "comma bacilli" multiply when moist, states that they die after drying more quickly than almost any other form of bacteria. "As a rule, even after three hours' drying, every vestige of life disappears." But

there are facts to prove that the fomites of cholera have preserved their infectious properties in dry places. (c) No one has been able to produce cholera in any animal by inoculating "comma bacilli." Prof. Klein has even swallowed them without any injurious result. Pigs inoculated with cholera dejecta die, according to Emmerich, with septicæmia, with no choleraic symptoms whatever. (d) Lastly, the "comma bacilli" have been discovered only in the intestine. Koch assumes that they secrete a poison which produces the symptoms, but Emmerich and Brunton have shown that the choleraic intestine is incapable of absorbing, and that reaction in the disease is too rapid to admit of a bacterial origin.

Chemical theories of disease assume that all diseases attended with variations of temperature are due to some abnormal chemical action in the system. But in zymotic diseases it is assumed that the chemical substances which sets up the changes in the system are introduced from without; that they have special affinities for particular tissues, and that they themselves can increase in volume and still remain unaltered in composition. At the first glance it seems doubtful if these phenomena can belong to any except a vitalized substance. Yet we will find, on reflection, that all these requirements can be answered without calling any germs to our assistance. Zymotic chemical poisons may have selective powers just as well as drugs or bacteria.

Zymotic poisons may be solid, liquid, or gaseous, thus accounting for the difference between contagious and infectious diseases, which can hardly be explained by the germ theory.

The poisons of purely infectious diseases are gaseous; the poisons of purely contagious diseases are solid or non-volatile liquids; the poisons of diseases both contagious and infectious are solids or liquids capable of volatilization. If these diseases are all alike due to micro-organisms, why are they not all alike contagious and infectious?

The influence of season on disease can be more easily accounted for by assuming a chemical than a bacterial origin of disease. Micro organisms are most readily developed in summer; many zymotic diseases are most prevalent in cold weather. With chemical substances, on the other hand, some require cold and others heat for solution.

We can explain nearly all the phenomena of zymotic diseases, by showing the analogy between the behavior of zymotic poisons and chemical compounds. We will discuss some of these phenomena in detail:

1. *Period of incubation.*—In connection with the chemical processes associated with a zymotic disease, poisonous products are formed which are in part eliminated by the excretory organs. When these poisonous substances have accumulated in the system in sufficient quantities, the characteristic symptoms of the disease appear. The poisonous substance is produced more rapidly in some diseases than in others, thus explaining variations in the length of periods of incubation. In cholera Asiatica, for example, the poison is rapidly formed, and we have a very short period of incubation. In syphilis and hydrophobia, on the other hand, the chemical changes are slow and a long period of incubation is the consequence.

The influence of hygienic surroundings is also explained on this theory. As a consequence, typhus, scarlatina, measles and all infectious diseases are aggravated by such conditions as impure air and filth.

2. *Sudden appearance of symptoms.*—This is probably due to a cumulative effect of the poison formed.

3. *Variations of temperature.*—In all chemical reactions heat is either absorbed or liberated. As a rule, when substances pass from a solid to a liquid state heat is taken up; on passing from a liquid into a solid state heat is given off.

The albuminoids in the body pass through a long series of changes before being eliminated, and it is probable that some of these changes are attended with the absorption and others with the evolution of heat. So with the chemical changes in disease; the temperature of the body will rise or fall according as the prevailing chemical change is attended with the evolution or absorption of heat.

4. *The eruption on the skin*, attending many zymotic diseases, is entirely analogous to that following the ingestion of many drugs.

5. *The non-recurrence* of most zymotic affections may be explained, (a) by assuming that the chemical constituents of the tissues, which can be attacked by a given zymotic poison, have all undergone a change, so that there is nothing to be acted upon at a second exposure; (b) by the establishment of tolerance for a vigorous zymotic poison.

6. *Mutability of zymotic disease.*—We have seen that the same chemical substance, when introduced into different compounds, produces different results. Sulphuric acid in starch forms sugar; in alcohol, ether. Now, the chemical composition of the human body varies with conditions of age, disease, sex, and physiological state. Consequently the same zymotic poison may produce different diseases. The poison that will cause scarlet fever in a child may produce erysipelas in a wounded man, or puerperal fever in a lying-in woman. Measles and mumps usually prevail at the same time, the latter being most common in boys, while scarlatina anginosa and diphtheria can, in some cases, hardly be distinguished.

7. Lastly, chemical theories of disease afford a more rational basis of treatment than germ theories, for we will endeavor—(a) To prevent the formation of the poison. (b) We attempt to destroy or counteract the effects of the poison by giving chemical or physiological antidotes. (c) We endeavor to eliminate the poison by promoting the activity of the excretory glands. (d) Lastly, we endeavor to support our patient until the abnormal chemical processes cease, and the poison is eliminated from the system.

## THE EXTENT, CAUSES AND PREVENTION OF PREMATURE DEATH.

By EUGENE FOSTER, M.D., Augusta, Ga.

From *The Atlanta Med. and Surg. Jour.*:—I define premature death to mean every death from any cause, save old age or the natural decay of the structures and functions of the body.

What is the normal, inherent longevity of man? Answer this question and we establish the standard by which to determine what is premature death. The most eminent writers on this subject have from observation, anatomical and physiological data established the fact that the natural, inherent life of man is from eighty to one hundred years. Every human being has a natural right to this length of life. Every death at an age short of it is unnatural, and attributable to man's ignorance or carelessness.

There are mainly four essentials to the attainment of the inherent, potential longevity of man as a race. They are: (1) Purity of atmosphere and water. (2) Wholesome food, both in quantity and quality. (3) The inheritance of a healthful constitution. (4) Freedom from contagious and infectious diseases. Man in his individual efforts has little or no control over either of these essentials of life. The only power which secures the individual the enjoyment of either of these blessings is the State. In all societies the State is the delegated guardian of man's life, as well as his liberty and property. This is the idea which I wish to elaborate.

First, can an individual protect himself against pollutions of the air he breathes or the water he drinks? Take any city you please and examine the sources of pollutions of air and water and you will find a want of drainage and a failure upon the part of the municipality to thoroughly and rapidly remove all refuse matters—both liquids and solids—from the inhabited area.

*Food.*—There is a lamentable want of information upon the part of the people as to the various kinds of food for man, their dietetic value, the relations which food bears to health and labor, and upon the physiology of digestion. It should be one of the most solemn duties of government to impart such information to the populace. The muscular strength of the people is primarily the source of the prosperity of a nation, and this can only be secured by the proper use and distribution of food.

*The Inheritance of a Healthful Constitution.*—To secure healthy progeny the parents must be healthful. This is a proposition so plain that even the



fool is compelled to assent to it, and yet does man pay any attention to this inexorable law of nature? Do you not constantly meet with the most glaring instances of man's failure to appreciate this solemn truth? Do you not frequently observe individuals who are diseased well-nigh unto death with consumption, scrofula, syphilis, epilepsy, etc., leading pure and lovely women to the marriage altar? If the law of the land is not and cannot be made powerful for prevention of marriage of such diseased individuals, is it asking too much of a wholesome and enlightened public sentiment to frown upon such wrongs to society? But we are assured that all efforts to protect children from inherited diseases will produce greater evil than good; that an individual marrying, with a strong taint of insanity, liable to bring into the world a whole family of lunatics, should be untrammelled to do so for the reason that such marriages often produce whole families of geniuses. If this is the process necessary to the manufacture of genius, may God Almighty save America from the production of a genius.

Man's stupidity is apparent in permitting cases of dangerous contagious diseases to scatter abroad the seeds of their infection, when he is all powerful to control them.

Truly has it been said, "the curse causeless shall not come." These diseases, in their origin and diffusion, are governed by inexorable laws, and while the chemist and the microscopist may be unable to detect their essence, yet the laws of their rise and spread are definitely known, so that man can either prevent or mitigate them if he will but do so.

Why should cholera be found in America? This is not its home. It cannot be kept alive here except by annual importation from foreign lands.

Are we powerless against yellow fever? By no means. Man has absolute power to prevent it. Its existence in this country is a shame and a disgrace to the civilization of the age.

With the numerous sources of diseases, why should we be amazed at the extent of premature death in America?

The prolongation of human life has engaged the study of the most learned of men, and as the result of that study an almost unbroken line of authorities, from the earliest dawn of civilization to the present time, may be cited, telling us that over the vast majority of diseases which produce premature death, man can exert arbitrary power to prevent or mitigate them. It is true that writers suggest various plans for securing this result, but they all unite in affirming that it is possible.

To widen the scope of human life, and promote the happiness and productive power of the race, is a field of work which should fire the zeal of the pure and good of every community. The health of the people is the wealth of a nation, and it is the highest and most sacred duty of government to spare neither time, talent nor money to advance the health of its citizens. Public health can only be advanced by organized effort. The organization must consist of municipal, State and national authorities, charged directly with this high and sacred trust.

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#### HOW DOES AMERICAN JOURNALISM AID THE DEVELOPMENT OF THE MEDICAL PROFESSION?

From the *Detroit Lancet*:—The *New York Medical Journal* says that "it regards the great distinctive service of American medical journalism as shown mainly in its counteracting influence in removing the pedantry sown in the medical colleges, and encouraging the expression of original thought in young men." Surely, it were a great thing to remove the stupidity engendered by medical schools, and to draw forth the powers of original thought which are dormant in the young doctor. Of the truth of this view we have no question, nor can any editor of any experience or success fail to have many personal experiences in this sort of work. In the very best sense of that term the medical editor is a teacher, and this, too, in causing

others to work for the common good. The education follows from the efforts of the young doctor to learn something of profit or interest to the profession, and then place this before the profession in the most attractive shape. The medical editor, in order to make his journal a success, is compelled to get the best work expressed in the best way. There is a class of doctors, who have the general culture and the brains, but are too modest to think of writing for the benefit of their seniors. From this class the medical editor draws most of his working co-laborers.

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### STUPID MEDICAL SOCIETIES—THEIR REFORM.

From the *Detroit Lancet*:—The *Medical and Surgical Reporter* expresses its disgust with the meetings of some medical societies in emphatic terms. It says: "At a recent meeting of a very prominent medical society, twenty sleepy members were in attendance, and before the meeting was over some of these had slipped away. It is a rare sight to see the hall of any medical society respectably filled, unless it be on some occasion when a supper is to follow the meeting, and then the majority of the members come straggling in late. It was said by the chairman of the last meeting of the Pennsylvania State Medical Society, that the majority of the papers were unworthy to be listened to. Does not the character of the papers read account in a great measure for the emptiness of the seats? Many of the papers read before the societies are mere rehashes, with no earthly use for their delivery save the author's thirst for notoriety."

The foregoing is not a very fascinating account of medical society meetings, including those of the American Medical Association. But that it expresses the truth respecting the meetings of most societies, there can be no doubt. Beyond a doubt, the conduct of most medical societies is for obtaining by the few of some cheap notoriety. These few read papers, unworthy of a first course medical student, propound absurd theories without any basis in this world, or any other; occupy the time with matters of no general interest or importance simply that they may seem first.

Reform is called for from the top to the bottom of most general medical societies.

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### LYCURGUS AND HIPPOCRATES—CAN QUACKERY, IN OR OUT OF OUR PROFESSION, BE SUPPRESSED BY LEGISLATIVE ENACTMENTS.

By Q. C. SMITH, M.D., Austin, Texas.

From the *Southern Practitioner*:—Just here, permit us to note a well known fact, but which seems to have been overlooked by some medical writers: that State Medicine, in a true and proper sense, does not include in its legitimate domain, the consideration of legislative enactments intended to control the practice of medicine.

Lycurgus would have us believe that legislators and other civil law-makers were little less than gods, while the balance of mankind were at best mere imbeciles, hence he would enslave all other classes of citizens to politicians,—as a class, the most venal and corrupt in all ages and countries.

'Tis plain that under such a regime the devotee of science could exist only as a contemptible fawning sycophant. On the other hand, Hippocrates taught that science, in any and all its branches flourished only when left untrammelled by legal hamperings, free to work out its own grand mission of ever-increasing beneficence, doing good to all, working harm to none. And the beautiful teachings of the wise Coan sage are as true and applicable to-day as when our noble exemplar laid deep and wide the enduring principles of free scientific medicine.

Fellow laborers, can we do better for ourselves, or more surely promote the best and highest interests of those whom we profess to honestly serve, than to faithfully follow in our revered father's honored footsteps?

Now we cannot doubt, for a moment, the honesty or high honor of any professional brother who has led or joined in the oft-repeated appeal to legislative bodies for more secure guarantees for individual practitioners of our profession, or a greater degree of protection against incompetency and imposition for the people at large. But we certainly do doubt the wisdom of such policy. And the doubt just expressed is but the echo of the voice of all the ages, even down to this present momentous occasion, made audible by the imperishable utterances of the greatest philosophers of all times, peoples and countries.

For the so-called protection of honorable medicine, be it from royal signet or legislative seal, has ever resulted in oppressing, fettering and degrading honorable physicians, and in giving legal license and increased influence and respectability to the worst class of quacks and charlatans, both in and out of the profession.

But we hear impatient impetuous young medico-legal physis, contemptuously vociferate! What did those hoary ancients know of these great United States, much less of the affairs of our grand empire Texas? The celebrated philosopher Huxley, who has investigated the subject under consideration most profoundly, tells us in a recent lecture, that, scientific medicine has progressed in development, both morally and intellectually, and advanced in usefulness in England, not by the fostering assistance of civil enactments or political affiliations, but that Hippocrates has successfully marched from many well fought fields to greater victories, in spite of the presumptuous hamperings and harassments of officious Lyncurgus. \* \*

For the people it will be a sad day when any profession has the world all their own way. No my friends, you cannot suppress the quack, or elevate the practitioner that needs elevating, by legislative enactments; for they find place and favor in all professions and avocations, and are simply an outgrowth of human corruption, and doubtless will be found in all human institutions this side of the millenium.

But notwithstanding all we have said against the alliance of politics and medicine, we would not have physicians, either individually or as a collective representative body, to idly sit with folded arms, stolid spectators of the monstrous impositions that are daily being perpetrated upon our unfortunate fellow citizens—whether the imposters be “regular, legal and protected,” or not—and regardless of the fact whether or not said unfortunates were the active or passive agents in the cause of their own injury or ruin.

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### MEDICAL EXAMINATIONS FOR LIFE INSURANCE.

By ISAAC N. HIMES, M.D., Cleveland, Ohio.

From the *Med. and Surg. Reporter*:—

*Some Conditions of Doubt in Examinations of the Respiratory Organs.*—The question, What is the influence of chronic nasal catarrh upon health? Will the catarrh extend to the larynx and trachea and lungs? Will it produce ill health from impaired digestion? A chronic catarrh of the nose and pharynx is not very rare in those who are applicants for life insurance. It is generally considered to have no influence in shortening life, unless the case becomes very aggravated. The conditions spoken of are not at all those in which there is a syphilitic cause, but cases of simple catarrh. I have seen at least one case in which bronchial catarrh succeeded to severe chronic catarrh of the nose and pharynx.

The passage of large quantities of mucus and muco-purulent secretion from the posterior nares, down into the stomach, sometimes impairs the appetite, and thus influences digestion. The medical examiner cannot, on these accounts, entirely ignore these conditions of chronic catarrh. At the same time, a too rigorous exclusion of mild cases would lessen the proper business of a company, and deny insurance to many fair risks.

The second condition of doubt arises sometimes in connection with the respiratory organs, from some little roughness of breathing which is due to that which we call a cold, accompanied with an acute catarrh of the nasal passages. The same influences which have produced the cold—perhaps the breathing of raw, cold air—have had some effect upon the apices of the lungs.

I have found some roughness of inspiratory and expiratory murmur, though rarely in men who, like carpenters, have been working in the dust made by saws. Such a permanently acting cause would require repeated examinations and postponement, to ascertain whether the condition was evanescent or permanent. The irritating conditions are similar to those which, in stone-cutters and grinders, produce a chronic phthisis. There is also liability to acute bronchitis or pneumonia.

*Some Phenomena Connected with the Circulation of the Blood.*—There is sometimes a blowing sound produced by the subclavian and carotid arteries, heard when the walls of the chest are thin, and when the heart is urged to strong action for a little while, under the slight excitement of the beginning of an examination of the chest. This sound, which is not pathological, is heard at the beginning of the examination, and disappears after it has progressed. It is just as a murmur is heard when the stethoscope presses upon the carotid artery, and as a murmur is heard in the relaxed vessels of anæmia.

*Fainting in the Process of an Insurance Examination.*—Contrary to the above-named stronger action of the heart, the mental state produced by an examination may result in weakened action of the heart. Strong and healthy persons, almost always men, may suddenly faint under the process of an examination of the chest. This may occur more frequently in examining the chest when the person is in a standing position. In both the above phenomena, there is not necessarily a departure from health.

*The Place Where the Examination is Made.*—The present condition of competition among life insurance companies in large cities make it necessary, in order to do business, that the medical examiner should often make his examinations at the applicant's place of business—the counting-house, the store, the factory. But the inconvenience of the place itself renders the examination liable to be defective; this is especially the case as to diseases of the chest. And an expert ear can detect a good deal, even amidst a confusion of sounds. But in the midst of the above distractions, or where there are coverings to the chest, the ideal, and the safest, examination of the chest is made with the stethoscope applied to the naked skin, and the ideal insurance company will insist upon this method of examination.

*Concerning Rejections of Applicants.*—The more careful the company and its examiner, the fewer rejections of applicants there will be; for the applicants will be a select class before they are brought to the examiner. Lately, even beneficiary societies have directed an examination of the urine, as well as of the lungs and heart, in the case of every application for membership.

The following experience will show what pathological conditions may be found in such a select class of presumed healthy persons as has been mentioned above. One of the two hundred and sixty-six examinations for life insurance made consecutively, in every one of which there was included an examination of the urine for albumin and sugar, there were found the following cases of defective health: three had asthmatic conditions; two had irritable bronchi, with roughness of respiratory sounds; two had commencing acute bronchitis; one was declined on account of family history and hereditary tendencies alone; one had weak digestion and impaired nutrition; one had imperfect eyesight with other imperfections of age; three had albumin temporarily in the urine, which was due, in one of the three, probably to leucorrhœa, and in two of the three to gonorrhœa; two had permanent kidney albuminuria; one had oxalic acid, with clumps of leucocytes; one had sugar.

*Albumin in the Urine.*—Of late it has been asserted that there may be albumin present, as a physiological ingredient, in the urine at certain times in the daily twenty-four hours in the adult; also that it may be physiologically present in the urine of boys and girls. For the insurance examiner,

however, there is only one safe decision to follow, namely, that albumin in the urine is to be accounted abnormal in every applicant for life insurance.

*The Presence of Sugar in the Urine.*—There have been published accounts of sugar in the urine which appears there physiologically. Probably physiological temporary saccharine diabetes is more common than physiological albuminuria, if the latter occurs at all.

In the last five years I have observed three cases in which the persons who had saccharine diabetes appeared to be in good health.

One of these was a case in which sugar was present for a month. This disappeared by removal of the gentleman from undue mental strain in business. In examinations made during a year, and after a year had passed, there was not found any further presence of sugar. So far as known, there was no change of diet in this case, nor was the person subjected to medical treatment.

In the second case, the person had the appearance of perfect health five years ago, when the presence of sugar was first discovered in the process of an insurance examination; and he still has the same appearance and subjective experiences of full health, physical and mental. Each year, for five years, I have examined the urinary secretion in this case, and have always found an abundance of sugar. On the 24th of April of this year I again made the examination, but found no sugar in the secretion of the whole twenty-four hours. His physician made an examination a week previous to mine, and found no sugar; but about a week before that he had found an abundance, namely, eight per cent. In this case a control of the diet causes the sugar to disappear. The amount of urinary secretion in twenty-fours has not, upon the occasion of any of my examinations, varied much from the physiological average. His physician tells me that the administration of bromide of arsenic causes a noticeable diminution of sugar. The amount of sugar varies from none at all to eight per cent. In this case, during all these years, this gentleman has been, so far as appearance and feelings are concerned, in perfect health, actively engaged in extensive business, and enlisted in projects of large benevolence.

### THE NECESSITY OF ADMITTING A VITAL PRINCIPAL.

By THOMAS DWIGHT, M.D., Boston, Mass., Parkman Prof. of Anatomy at Harvard University.

From the *Boston Med. and Surg. Jour.*;—To the student whose ideas of philosophy have been gained, not only from so-called popular science, but from the teaching of many men eminent for their knowledge, a vital principle seems useless, even absurd. In fact there is something comical in the surprise with which young men whose teaching has been solely materialistic learn that any one of any scientific attainment should presume to defend it.

I propose to show that it is reasonable and even inevitable to admit a vital principle, and this by three distinct arguments each based upon observation.

The first is that in every living organism, vegetable or animal, something non-material is necessary to give the matter unity.

In a plant or animal we see a process of growth that is essentially different from mere increase of bulk. The organism does not increase as a whole, but each part increases at a different rate, depending on the needs of the individual and undergoing waste in some cases, while the whole is still growing. Now it is evident that the living organism is one in a very different sense from that in which a heap of sand is one or a wave is one. You can add and subtract sand or water and the accumulation becomes larger or smaller, and in the same way the living organism can take in or give out matter without its oneness being disturbed. But what makes the animal one? It is clearly that principle which so regulates its nutrition that each part grows at its proper rate, aids the others, dwindles when its work is over, and, in short, forms a harmonious whole. Now there is absolutely nothing that we know of in matter that can bring this about.

There certainly is some such power. It is found only in living organisms, and therefore has been named the vital principle.

The second argument is the theory of sensation. It seems from what we know of matter that it is impossible for it to feel. Let us suppose that, an impression being made on each of a group of nerve cells, each one enters into the impressed condition and feels the impression made upon it. Let it be said, in parenthesis, that it is entirely an assumption that the impression is tantamount to feeling, but supposing that to be the case it is evident each cell can feel only the impression made upon itself and can know nothing of the impressions made on its neighbors. It is as if each member of an audience heard one note of an air, or as if each element of the retina saw what came in the ray of light falling on it, and that alone. To say that the impressions are concentrated on a smaller group of cells does not help us out of the difficulty, for even if we finally brought the nerves to a single cell, even that cell, being extended, has parts, and each can perceive only the impression made on itself. Evidently, then, there must be a non-material unextended element which, governed by other laws, can feel the impression as a whole.

The third argument consists in the freedom of the will. We shall consider this solely in man, because the argument is based on our own consciousness. All we know of the laws of matter tends to show that a given cause, acting under similar circumstances, produces inevitably the same results. Were it otherwise, there would be no physical law. It has been asserted that man in the same way unconsciously follows the strongest impulse, but all that is needed to refute this is unprejudiced introspection. If we suddenly touch what hurts us we instinctively withdraw the hand, but we know that by strength of will the shrinking can be overcome. A very striking example of the freedom of the will is the ability to choose to which of two sounds the attention shall be given. It is of daily observation that it is possible for us to direct the attention to a lecture while a band is playing or to neglect the lecture to listen to the band. We may even, by force of attention, become unconscious of distracting noises, even loud ones. Clearly we could not do so were material forces the only ones at work.

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### THE TREATMENT OF OBESITY.

Abstract of the discussion of this subject which took place in the Congress for Internal Medicine, recently sitting at Weisbaden.—[*Medical News.*]

Prof. Ebstein said, that no treatment dare be considered rational which results in inanition or a conspicuous destruction of other tissues than adipose. Further conditions of such treatment are, that it shall be easily carried out, and that it shall involve no useless inconvenience or great sacrifices in the life of the patient.

It is also evident that the method of treatment may be based upon the withdrawal of certain articles of food, upon regulation of habits of life, or both. In point of fact, all methods heretofore adopted have aimed to restrict the excessive use of certain articles of food, as albumin, fat, and carbohydrates, which modern physiology teaches are the most important alimentary principles concerned in the formation of fat. A proper nutrition does not permit the withdrawal of albumin, but it is possible to place the fats and carbohydrates in such relation as to prevent an undue accumulation of body fat. He claims that by permitting the ingestion of a moderate amount of fat, hunger and thirst are diminished and a reduction in the over ingestion of food rendered more easy. The hydrocarbons on the other hand, of which sugars and starches are the type, are decidedly restricted.

A second characteristic feature of Ebstein's method is a limitation of liquids ingested, a part of the treatment which, as has been said, is facilitated by permitting the use of a moderate amount of fat. This is supplemented by measures which secure an increased loss of water by sweating,

such as forced muscular exercise, or suitable baths. Drugs are to be avoided, while the natural mineral waters, especially those containing a large amount of sodium sulphate, as Carlsbad, and Marienbad, so much vaunted for this purpose, are useless.

Ebstein objects to the method of Banting, which restricts the patient to an almost pure albuminous diet, because, although it accomplishes its object in removing excessive fat, it is not without danger: Oertel's method, through deprivation of water, is also efficient, but on account of the discomfort produced by the extreme thirst, is not well borne.

Henneberg, of Göttingen, the co-referee, who adduced a large number of facts based on the fattening of animals, said it was the universal testimony of farmers that the free use of water operates unfavorably on the fattening of animals. He also adduced the important fact, which should not be lost sight of in any system, that animals, once fattened, do not lose flesh even when the quantity of food is considerably cut down, provided they are kept at rest.

Baur, of Munich, agreed with Ebstein in that the true Banting system might be harmful, but thought with Voit, that a modification of this system by which a limited amount of non-nitrogenous food is permitted, could be applied with efficiency and without disadvantage.

Zuntz, of Berlin, saw no good reason why Ebstein should distinguish between fats and carbohydrates. He thought the indication was simply to cut off the fat-producing foods, and it mattered not how it was accomplished. In the matter of diminishing the ingestion of water, he made the important point that it makes a difference whether the kidneys and organs of circulation are normal or not. So, too, Zuntz has found that the addition of a saline solution to the food facilitated the combustion of fat.

Baelz, of Tokio, remarked that, in Japan, obesity is extremely rare among the laboring classes, who live exclusively upon vegetables, which is perhaps ascribable to the fact that the Japanese consume very little water and almost no alcohol.

While it is evident from the above that there is no clear cut road for the removal of obesity, we think we may take courage to advise, with some hopefulness, those who may consult us on this subject. It is evident, moreover, that we must avail ourselves of one or more of the means to this end, according to the circumstances of the case. We would remind our readers, however, that the idea of active exercise must never be lost sight of, and that more can be accomplished by combining it with a moderate restriction of the fat-producing foods by their total elimination unaccompanied by measures which favor the combustion of the elements of fat.

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## APHORISMS PERTAINING TO TEMPERATURE DURING HEALTH AND DISEASE.

By F. H. SCHMITT, M.D., Schulenburg, Texas.

From the *Texas Courier-Record of Medicine*:—The temperature of the human body is 98° F., or a small fraction more or less. This normal temperature is no guarantee for perfect health, as is sometimes believed, but any considerable deviation above or below it can be considered as a sign of ill health, and these deviations are of a remarkable regularity.

Deviations are occasionally caused by external influences, but then they are of but short duration and amount to only a fraction of a degree.

Common causes for deviation in temperature during an attack of illness are: Complications, sudden aggravation, costiveness or diarrhoea, retention or evacuation of urine, spontaneous hemorrhages or hemorrhage brought on artificially, transportation from one place or room to another, change in regimen, effects of medicines or a favorable termination.

A constant normal temperature may be considered fair proof of a good constitution. Greatly increased temperature after external influences is

characteristic of an abnormal condition of the body, and observing each elevation in a subject having usually normal temperature, it may be the means of detecting hidden diseases. Firmness of highly increased temperature, we find mostly in typical and highly developed diseases.

Temperature is not the only, but in many, if not in most instances it is the surest scale in estimating the degree which disease has attained.

Normal temperature excludes certain disease; is evidence of a favorable change having taken place, or is a sign of beginning convalescence.

Elevation of temperature is generally accompanied by peculiar sensations such as general *malaise*, frost, heat, thirst or headache and an increased pulse.

In a few instances we may observe augmentation of temperature during seemingly good health and without increased pulse. Still, even in such cases does the rise in temperature indicate an abnormal condition, and for this reason elevated temperature is of more diagnostic value than the rate of the pulse or even the cheerfulness of an individual seemingly in good health. The degree of elevation is sometimes proportionate to the degree of frequency of pulse and other signs characteristic of sickness or disease, but more frequently this conformity is defective or entirely lacking. In cases disproportionate in this respect we should be guided by the temperature.

But one observation of an abnormal temperature, no matter how trifling or how great it may be, is of itself of little diagnostic value. It only indicates: that the individual is ill (every elevation above 99) or has fever (increased temperature to 102 or 103) or is in extreme peril (very high temperature, 104, 105, 106 or more.) By taking other conditions into consideration along with but one observation of temperature we may be able to make a correct diagnosis. Taking the temperature at regular intervals during an acute attack of disease should be considered of the utmost importance to the welfare of the patient.

During convalescence, rise in temperature is the first and almost unfailing symptom of threatening relapse.

After seeming recovery, continuance of but slight increase of temperature is a pathognostic symptom of imperfect restoration or some sequel.

Temperature can of itself, or in connection with other symptoms, be positive proof of impending dissolution.

In a few instances only do we observe lowering of the temperature below the normal, *i. e.*, after a favorable crisis, during the morning remissions of fevers of a remittent or intermittent type, during acute collapse, agony, and according to some authors, in apoplectic injuries of the brain (coma).

Unequal distribution of temperature in different parts of the body we observe at the commencement of a chill or rigor, during collapse, agony or during severe lesions of the organs of respiration or abdominal viscera, in skin diseases and in partial paralysis.

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### ANTIPYRESIS.

By WM. H. KELLY, M.D., Covington, Ky.

From the *Cincinnati Lancet and Clinic*:—As to the dangers of continued high fever, they are already well known, and the modern treatment of fever, controlling as far as possible the hyperpyrexia and at the same time by food and tonics sustaining the body strength, stands as a lasting monument of scientific progress. Graves, I believe it was, who asked that his epitaph should be: "I fed fevers." This was the first step, and soon the endeavor to control the fever followed, and upon observation and experiment since that, is founded our modern antipyretic treatment.

The object in antipyretic treatment is to produce and prolong a lower temperature and thus prevent the waste of tissue and allow nature an opportunity of repairing the damage already done. Let the fever be continuous,



with no remissions or intermissions in which nature can assert herself, and parenchymatous changes follow affecting the muscular tissue, and especially important, the cardiac muscle.

Some consider the height of the temperature as the dangerous element while others contend it is the duration. A moderate fever long continued will produce more serious changes than a high temperature of much shorter duration.

Clinically we are still unable to distinguish with certainty those cases in which the increased temperature is due to disturbance of the nervous centre controlling the body heat. Hence in the vast majority of cases the fever must be considered as the result of disturbance of the heat producing or heat losing function. In some cases we find a high temperature with the skin dry and hot, and here we may consider it a fever from *decreased heat loss*. In a second case the temperature will be found excessively increased, but the skin hot and moist, even covered with drops of sweat; this we consider the result of *increased heat production*. In these two cases our therapeutic interference must, from the nature of the cause of the fever, be different. In the first case we must increase the heat loss by using remedies that directly withdraw heat, as cold; or we must cause the superficial blood-vessels to dilate, and, carrying a greater amount of blood to the cutaneous surface, the heat loss by radiation is increased. In the second case with high temperature and a moist skin, we have an over production of heat, more rapidly than can be disposed of by the normal heat loss. Here we must administer an antipyretic which will control the heat production, something that will stop the rapid oxidation of tissue, and it is in such cases that quinine finds its special use. There are certain features in every hyperpyrexia that to the watchful practitioner become guides as to what remedy shall be used. He who sees and regards these will be more successful in his antipyretic treatment than he who uses only the one symptom, fever, to be treated.

Quinine is probably the most popular antipyretic in use, and also the most reliable. There are more efficacious remedies, but quinine when it does no good, at least does no harm. As a rule, in high fever the gastric functional activity is much lowered, and a *solution* of quinine is more readily absorbed than when given as a pill or powder. The effects of quinine are most marked about six or eight hours after the administration, and the most decided effect on the fever is found from ten to twelve hours after the administration. The only alarming result from quinine in antipyretic doses, is the collapse-like depression dependent on the rapid deferescence of the fever. This is to be overcome by stimulants, and, if necessary, external heat. Quinine may cause vomiting, and this to such an extent as to contraindicate its internal administration. To have its antipyretic influence in its greatest intensity coincident with the normal minimum temperature depression (4 to 6 a.m.), the dose of quinine should be administered about 8 or 9 p.m. Then in the early morning of the next day the temperature will be markedly lower and the general condition of the patient improved.

*Sodii Salicylas.*—This is now generally used in preference to acid salicylic on account of its greater solubility and not being so apt to cause gastric disturbance. This drug is more apt to cause alarming collapse than quinine, and its action is characterized by profuse sweating: the fall of temperature, however, is not dependent on the sweat, since it frequently occurs without the excessive perspiration. The effect of the medicine manifests itself in a few hours and the most marked antipyretic effect in four to six hours. Thus the proper time to administer the dose would be 9 or 10 p.m. In diseases as for instance pneumonia (croupous), characterized by a critical temperature deferescence, the effect of the salicylate of soda must be carefully watched, since if the effect of the medicine should coincide with the crisis of the disease dangerous depression may be produced. In fever cardiac weakness is always a contraindication to the use of salicylic acid. Quinine is especially efficacious in fevers characterized by remissions and intermissions, while the salicylate of soda seems to act equally as well in those cases of continuous high temperature with no remissions, as in those where there

is a variation. In such diseases as pneumonia, with alarming collapse anticipated after the use of the medicine, it is best given in small doses, repeated often enough to produce a decided impression.

*Antipyrin.*—After using and abandoning kairin, hydro-chinon, thallin and benzoate of soda, the German pharmacists have brought forward another candidate for the place of the "universal antipyretic." It is a product of coal tar and is called antipyrin. Its action is supposed to be principally through the nervous system. The dose is, 2 gms. every hour until 6 gms. have been taken. [This method is not without danger. A safer plan is to give 2 gms. (30 grains) and follow it hourly with 15 grain doses (1 gm.) until 75 grains have been taken.—Ed.] The medicine is freely soluble in warm or cold water, hence is easily adapted to administration per os, per rectum, or hypodermically.

The constitutional effects are produced in about three hours and is frequently accompanied by profuse sweating. Vomiting frequently results from the internal administration of the medicine, and when this is severe we must then administer it in the form of a rectal or hypodermic injection.

One peculiarity about its effect is the frequent production of an eruption very much like that of measles.

As a sure antipyretic antipyrin seems to have acquired quite a hold upon the profession.

The effect is transient, however, and does not continue very long, so the administration of the remedy must be repeated after a comparatively short interval.

The real place of antipyrin as an antipyretic has not yet been determined.

*Cold Water.*—When to commence antipyretic treatment is a question that in the majority of cases is determined as soon as the temperature reaches a certain height. This standard is usually placed at 40° C., (104° F.) and as soon as this degree is reached the fever must be at once controlled. In fever like typhoid, where the fever is long continued, the standard is usually placed  $\frac{1}{2}^{\circ}$  to 1° lower, since here it is the duration and not the height of fever that is so injurious. In cases of continued fevers affecting patients already exhausted by disease, it might be well to establish our standard even lower. Especially would this be so in a case of old heart disease in which fatty degeneration dilatation of the cavities had occurred. We must study each case, and upon the knowledge thus gained form our line of treatment.

The cold water treatment should only be used in cases where the heat loss is not equal to the heat production. This is usually accompanied by a hot, dry skin, and is the type of fever known in days gone by as the "sthenic." Contraindications are signs of heart failure, abdominal inflammation and intestinal hemorrhage, though Liebermeister denies the last as a contraindication. In cases of high temperature with sopor the cold douche is very efficacious in restoring consciousness and lowering the temperature.

Salicylate of soda finds its most decided action in the hyperpyrexia in rheumatism, but here it is more a specific action than a simple antipyretic. In its true antipyretic use this salt's scope is about that of cold water. In some cases, however, the patient's body being covered with a thick layer of adipose tissue, the cold water has no influence, while a medicinal antipyretic is more efficacious. The only contraindication to its use is heart weakness, but at the same time, especially in pneumonia and diseases characterized by a critical fall of temperature, the effect must be carefully watched.

Very frequently one drug will fail us and we must use another. Especially in the cold water treatment is the administration of one of the medicinal antipyretics in conjunction with the baths of decided advantage, and fever that had been only slightly lowered by cold baths after a dose of quinine sinks almost to a normal.

Then personal idiosyncrasy will now and then exclude a remedy. In this regard quinine seems to disagree more than the others. I have seen one case in which it produced urticaria, and the suffering from this was tenfold greater than that from the fever. I know three females who cannot take any considerable dose of quinine because it brings on menstruation and uterine pain.

In the discussion which followed Dr. Whittaker remarked that antipyretics do not attack the cause of disease but its effects. It is a question whether salicylate of soda and quinia act in malaria and rheumatism by virtue of their antipyretic properties. They are regarded rather as antimycotic agents, and take rank in antipyretic value according to their antiseptic powers.

The essayist had not placed sufficient stress on one antipyretic agent—alcohol. It is perhaps the most effective agent we possess in some cases having both antipyretic and antimycotic properties. Its effect is especially marked in sepsis as in surgery, snake bites and some acute infections.

The speaker has more faith in alcohol in scarlatina, small-pox, puerperal fever, etc., in malignant forms than in any other agent. Moreover it is the most valued of all foods for fever.

Then digitalis is worth a word. It is an antipyretic in that it holds up the heart, especially in pneumonia.

Dr. Young stated that his experience with antipyretics was very unsatisfactory, especially when given in large doses. In the vast majority of cases he has obtained no results from 20 or 30 grains of quinia, which he really regarded as a waste of the drug. He had never seen a case of typhoid fever controlled by 20 or 30 grains of quinia repeated every three or four hours. Digitalis has likewise proven unavailing in his hands. He had given aconite and had produced poisonous effects. The cold baths had been followed by injurious effects in children. He did not believe that it was possible to employ them with sufficient discretion. He had always used the cold sponging in cases of scarlet fever, and was rarely disappointed in its use. Sponging with tepid water, and the attending evaporation will relieve the patient and bring down the fever.

Dr. Cassat did not regard quinia of much value in treatment of typhoid fever. He preferred cold water and whiskey, and would certainly hesitate to give a large dose of quinia.

Dr. Nickles said he fully agreed with the statement that quinine may do harm in febrile affections, especially typhoid fever. But this is attributable not to the remedy, but to the persons who abuse it. Quinine may do harm when used in doses of two or three grains every three or four hours. In such doses it does not lower temperature.

But when quinine is properly used it is an antipyretic of immense value. Doses of 20 grains and more will produce a very decided reduction of temperature. Often when the evening temperature is 104° F., a large dose of quinine will cause it to fall to 100° on the following morning. Generally it is not necessary to repeat the dose before the lapse of 48 hours. Sometimes, it is true, quinine completely fails to reduce high temperatures, even if the dose be one drachm. But this is no argument against its use. All remedies sometimes fail.

But the principal question is, when is antipyresis indicated? An elevation of the temperature to 103° F., or even to 104° F. for a few days, is not followed by serious consequences. It may be supposed that when such a temperature continues for a long time serious damage will result. The parenchymatous degenerations are perhaps caused by the essential condition, the action of the cause of the fever, as much as by the febrile temperature. Still, whether the high temperature is the immediate cause of death or not, it cannot be denied that the experience of the best observers fully sustains the utility of the antipyretic method.

Dr. Christopher remarked that in cases of typhoid fever he had so often noticed a decided lowering of temperature between evening and the following morning without the use of antipyretics, that he doubted their efficacy.

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#### THE PRESCRIPTION OF ALCOHOL IN DISEASE.

From the *Polyclinic*.—By one of those clear and unmistakable revolutions of thought which come out of much contention and laborious research, it is now all but universally admitted by men of science that

to those who are in the enjoyment of good health stimulating drinks are of no service whatever; that such drinks do not help to maintain health, and that the most which can be said in favor of them is that they supply what is called a luxury. There remains, however, as yet, an argument which is to the effect that alcohol is an agent admitting of being applied with very good effect for the service of persons who, in various ways, are out of health. My object now is to consider, with all candor, that position. It were a singular anomaly in nature if what is not necessary, as a general principle or rule of life, for maintaining the healthy in health, were necessary for bringing the unhealthy back to health, and for keeping them in health. But as such is assumed to be the case by many whose opinions are worthy of the highest consideration, those who abstain should be ready to consider the position asserted by those who do not abstain.

*Deaths from Neglect of Alcohol.*—The first of the arguments that has been set forth by the medical advocates of the use of wine and other alcoholic drinks, is that there are conditions of disease in which, according to the experience and belief of the advocate, such drinks are essential. Some of these advocates have seen sick persons sink and die, such persons, in states of great enfeeblement, having doggedly, and with a devotion worthy of a better cause, refused stimulants and collapsed. Of this class of persons, many physicians are most severe in their criticism; but it is not a little remarkable that, being so severe, they forget that numbers of enfeebled persons collapse and die who were not in any way dogged against the use of stimulants, but, on the contrary, were ready and willing at any moment to take stimulants.

This, I think, shows an error on the part of medical advocates of alcohol, and indicates how easily the human mind, when it has been long educated in one direction, forces one-sided propositions first on itself and then on the world at large. There are thousands of medical men who have seen a far greater number of people who, to their last, were wine-drinkers, or spirit-drinkers, or beer-drinkers, die from exhaustion, than they ever did of people who, to their last, were total abstainers from such assumed life-preserving liquids.

On one hand, I am quite sure that the professors of medicine have as full right to use alcohol as they have to use any other medicinal agent. No clamor from the public ought to interfere with them in this part of their work. For myself, I claim the perfect right, and I exercise it according to my best judgment, with entire independence. I have prescribed alcohol for abstainers of the purest type, as I have chloroform, ether, and other medicinal substances. Against such legitimate use abstainers should not object, unless they can show by their learning that their objection is founded on sound physiological data bearing directly upon the facts of the case in which their objection is raised.

On the other side, in common fairness to scientific progress, the professors of healing ought so to prescribe alcohol that nothing shall be wanting in accuracy of prescription. The exact quantity, the exact quality, the exact purity of the alcohol ought to be known, and due provision made to ensure what is right in respect to quantity, quality, and purity. It is the duty of the physician to order, in fact, the absolute remedy, to define the dose, and to direct the time of administration, with the same care as if he were prescribing opium, chloral, or other active remedy. In prescribing he has before him a precise therapeutical intention, and he must be precise in prescribing if he would ensure the fulfilment of his intention.

If this view of the position spoken of were fairly taken, all difficulties between the prescriber and the public would soon cease. I have myself followed this plan for ten years past, with the utmost facility of action. When I want to administer alcohol, I write it in the prescription as absolute alcohol—Sp. Gr. 0.795—and I have it mixed with water to make it easy and ready for administration. In but three instances, amongst all the total abstainers whom I have attended, have I met with a demur.

This plan has also led me to form a far more accurate estimate of the real value of alcohol than I had ever before been able to obtain. When we say

to a person, "Take so much wine or spirit," it is not only that we do not know the amount of alcohol contained in what is ordered, but that we are never quite sure about the quantity that will be given or taken. There is a carelessness in the process, because when wine is spoken of, a little more or less of it is too often thought to be of no moment. But with alcohol in measured doses, there is a definite method, and all the results stand out clear.—*Dr. Richardson, in Asclepiad.*

### NERVOUS SYMPTOMS OF ENTERIC FEVER.

Dr. J. C. Wilson, Philadelphia, in the *Med. Times*:—The following conclusions are warranted by the above review of the subject: (1.) The so-called typhoid condition (stupor, somnolence; hebetude, prostration) is dependent upon the alteration of the blood caused by the infecting principle. It may be said that the intensity of these symptoms is proportionate to the virulence of the infection.

2. Delirium (especially when violent) and agitation, in a word the ataxic phenomena, are produced by the same pathogenic principle. But their manner of development and their course are to a great degree influenced by the pyrexia. The fact, however, must not be overlooked that certain forms of delirium occurring in enteric fever are not dependent upon the elevation of the temperature.

3. Certain forms of delirium, especially delirium ceasing after free epistaxis, and certain muscular disorders, such as convulsions and contractures, must be ascribed to hyperæmia. Disturbances of sensation are likewise in many instances the result of congestion of the nervous centres.

4. Vertigo, delirium, etc., may also be due to anæmia, which plays an important part in the production of enfeeblement of the central nervous system. Collapse is very often due to abundant hemorrhages. Inanition, producing, as it does, a profound denutrition, is a cause of anæmia and favors the collapse and marasmus which are so often fatal.

In conclusion, whilst intense pyrexia is the cause of serious symptoms and grave complications, it is possible to assign to it too high a position as a pathogenic factor. The dictum of Griesinger, "The fever in great part controls the situation," has exposed those who have accepted it to grave therapeutic errors. The nervous phenomena of enteric fever are produced by various causes which act sometimes together, sometimes separately. It is not easy to discover the predominant element in a pathology always complex, nor is it desirable to carry the analysis to an extreme.

### APHORISMS RELATING TO THE ETIOLOGY OF TYPHOID FEVER.

1. That there is a specific element necessary for the production of typhoid fever.
2. That the character of this specific poison is at present unknown.
3. That the specific element in the production of the disease can arise spontaneously has never been satisfactorily demonstrated.
4. That the specific element is contained in the excreta of an individual affected with the disease.
5. That the poison is not capable of reproducing the disease immediately upon its elimination.
6. That a period of decomposition is required outside the body before the specific poison assumes an active state.
7. That the specific poison is not capable of reproducing the disease immediately upon its reception by the individual; but must pass through a period of incubation before the specific results are attained.

8. That there are (at least) two ways in which the poison may gain access to the system, viz., through the water that we drink and through the air which we breathe.

The weight of authority is agreed upon these points, and I believe that my readers, with few exceptions, will concur with them.—*Dr. Wm. Stone Torrey, Med. Record, July, 1885.*

## DISEASES OF THE NERVOUS SYSTEM.

### ON THE BROMIDES IN EPILEPSY.

By Prof. G. LEE, Hotel Dieu (Revista Argentina).

From a translation from the Spanish by Dr. J. Workman, M. D., of Toronto, in the *Canada Lancet*:—What part of the therapeutic action belongs to the potassium, and what to the bromine? In the outset all the effects were ascribed to the potassa. The second phase of the bromide, was diametrically opposite to the first. The latest investigation by Kroy, on man, show clearly that all the virtue resides in the bromine; yet, on the contrary, on animals, the excessive proportion of 67 per cent. of bromine against 33 of potass in the bromide passes, or may pass, through without producing the least effect.

The third vicissitude undergone by the bromide of potassium, not only despoiled it of its curative property, but transformed its action on the heart into a real intoxication of the organ; in this turn the disadvantages of bromism were imputed to the potass, which was regarded as decidedly lethal; and it was believed that it was merely necessary to replace it by some other alkaline base, in order to get clear of all the dangers of a drug which is prescribed through months and years. This gave birth to the bromide of sodium, the bromide of ammonium, and lastly to the mixture of these two with the inevitable bromide of potassium. The polybromides, perhaps for the very reason that their complex effects are unknown, are to-day much employed, as a consequence of the potassophobia; yet it is enough to know that the habitual dose of six grams of the bromide of potassium introduces into the system only two grams of potass. How has it happened that such a dose, taken into the stomach, has never produced the least inconvenience.

The bromide is readily and promptly absorbed by all the mucous membranes; after some minutes it appears in the urine, and is eliminated almost in totality in two or three days; hence the imperious necessity of continuing the treatment without interruption; at the most it may be suspended for a day at a certain time, or the dose may be decreased; but to suppress it is dangerous. I have seen patients who, from having neglected the use of the medicine for a few days, have been attacked with convulsive fits after a quietude of eight months or a year.

The bromide is eliminated by the kidneys in great part, very little by the salivary glands, and still less by the stomach; and these organs are, as we shall show, but little impressed by it. The same fact does not apply to the respiratory mucous linings, which also serve as a means of passage to the bromide; they are profoundly altered in its elimination.

The bronchi are frequently the seat of a sharp irritation, which results precisely from the elimination of the bromide by the secretory glands, when it is presented as well as in the bronchial mucosa, in saturated epileptus; this bromic bronchitis, which is introduced by a short, irresistible cough, dry at first, and followed by a slight expectoration, is one of the most grave obstacles to the continuous treatment which epilepsy demands; I had believed it well to quiet this cough, which occurs chiefly in the night, by conjoining atropia with the morphia, but the result of the combination was generally harmful; either the cough did not cease, and it became necessary to interrupt the treatment, and even in three of the most grave cases to give up all medication; or, though the narcotics succeeded in calming the cough, yet they nullified the effects of the bromide.

I do not know of any sort of cough, whether of whooping-cough, of hysteria, or still less of tuberculosis, in which relief is derived from the bromide; the very contrary is the result. It must be stated that these prejudicial effects are observed even with the moderate doses of three grams.

In the skin, as in the bronchi, both a slight and a grave bromism are produced. It is very rare that the bromide, which is eliminated by the integument during life, or, in fatal cases, is found in the sudoriferous glands and likewise in the sebaceous follicles, does not, from the first day, produce a very evident effect on both layers of the skin; even from the first day, in small doses, it produces acne, which are seated preferentially on the face or the breasts; two or three grams suffice to bring this eruption, and it may be generalised and become numerous, so as to prevent the continuation of the treatment. In these cases I have always employed, with good results, arsenic in addition to the bromide; of late it has been proposed to use the bromide of arsenic, but it offers no advantage over the bromide of potass., with the addition of 10 or 12 drops daily of the solution of Fowler.

The kidneys are not changed either in structure or function in the elimination of the bromide; they do not secrete a larger quantity of urine than they do in the normal state, consequently the bromide cannot be regarded as a diuretic. Neither does the bromide change the composition of the urine.

The salivary glands eliminate the bromide with less facility than they do the iodide.

The gastro-intestinal mucous lining seems to be but little impressed by the bromide; it causes gastric pains at the moment of its introduction into the stomach, but these may be avoided or calmed by diluting the salt with a sufficient quantity of water.

We now come to define the true and useful properties of the bromide. The principal are two; one proceeds from the vaso-constrictor effects, that is to say, from its anemiant action; the other consists in its depressing action over the general reflex power, and more still over the excitability of the general cortex (? cerebral).

The bromide is undoubtedly an anemiant; all the experimentors are unanimous on this point. It is also known that anemia of the medulla oblongata is an experimental character of epilepsy. How are we to reconcile with this fact the beneficial action of the bromide? The reply is easy. The epileptic fit begins with anemia; against this transitory phase the bromide is powerless, but the fit continues and it ends in a hyperæmic process which provokes vaso-dilatation. It is by its antagonistic and vaso-constrictor action that the efficacy of the bromide is explained; but this is not all: it possesses, as we shall show, a strongly depressive power, or as we might say, a destructive one, over the reflex excitability, alike over the brain cortex and the bulb; consequently it impedes the attack and may also restrain the evolution of the disease.

Well now, is there a single vascular medicament that can be compared to it? Not one.

*Physiological Rules of Bromidation.*—It is not enough that we prescribe the bromide even in regular moderate doses, sufficient to obtain a favorable, and above all a definitive, result; it is important to observe all the rules taught by physiology, for the diminution of reflex excitability. They have been found clearly formulated, and I quote textually thus: "The efficacy of the bromide depends almost exclusively on the depressing action which it exhibits over the reflex power of the medulla oblongata and spinalis. Everything that may counterbalance this action, everything that may awaken the morbid excitability of the nervous centres, must be severely proscribed. Epileptics must be forbidden alcoholic drinks, wine, beer, or gaseous waters; alcohol and carbolic acid singularly arouse the faculties of the excito-motor and bulbo-medullary systems. Coffee and tea usually have the same result. The patients must abstain from smoking; the nicotine, by exaggerating (?) the vascular action of the bromide, and in a certain way tetanising the arterioles of the nervous centres, seems to extinguish the useful effects of the bromide. Violent gymnastics, the various hydropathic practices, particularly sea baths and douches, have a very fatal action, by provoking return of the fits. The same result follows physical pains, moral emotions, and genesic excitations."

I forbid all active medication, such as purgatives, emetics, revulsives, cauteries, etc., which are capable of producing a great disturbance of the organism; with still greater reason is it necessary strongly to prohibit obstructions of blood.

The auxiliary means which I have been enabled to approve of, are iron, especially the tartrate of potass and iron, one gram daily; arsenic under the form of Fowler's solution, 12 drops daily; quinia in extract and the sulphate of quinine; lastly, cod liver oil, and above all oxygenation by permanent residence in the country; such are the strengthening medicaments destined to combat the dangers of bromism and the weakening of the nervous system.

Bodily exercise in the open air, without fatigue, moderate intellectual work, well directed, constitute the most important auxiliaries—let these be attended to above all in controlling the education of children.

### DISEASES OF THE SPINAL CORD.

By PHILIP ZENNER, M.D., Cincinnati, O., Clin. Lect. on Diseases of the Nervous System in the Med. Coll. of Ohio.

From the *Cincinnati Lancet and Clinic*:—I have selected a number of cases, representing the most common diseases of the cord, from my case book, in which errors of diagnosis had been made. These cases will give us occasion to bring out the salient points in their diagnosis, at the same time that they illustrate how easily mistakes are made when those points are overlooked.

*Case 1.*—Mr. W., age 38, had been treated for rheumatic pains. He gave a history of having had frequent paroxysms of severe lancinating pains in the lower extremities for several years, and also various anomalous sensations, numbness and formication in the limbs, a sense of constriction about the waist, etc.

On careful examination some impairment of sensation in the lower extremities, a degree of insecurity in the feet when the eyes were closed, and an absence of the patellar tendon reflexes were found. There was also already observable some impairment in the gait, which, the patient stated, was worse at night.

The symptoms in this case were so pronounced that there was no excuse for an error in diagnosis. Locomotor ataxia should have been positively diagnosed. This diagnosis is based upon the history of characteristic lightning pains, peculiar sensations, and difficulty of walking at night, together with the slight anaesthesia, inability to stand firmly with closed eyes, and absence of the patellar tendon reflex.

Yet cases occur in which a diagnosis cannot be made so easily, where the nature of the pains is more doubtful, as the disease has made but little progress and its more striking symptoms are, therefore, not yet manifest.

I wish to lay especial stress upon a few symptoms which, even at an early period, enable us to make a positive diagnosis. These are the characteristic lightning pains, the absence of the patellar tendon reflex, and certain ocular symptoms which, though not found in the patient just spoken of, are often the earliest manifestations of the disease. These symptoms are: transitory paralysis of some of the external muscles of the eye, causing double vision; the so-called Argyll Robinson phenomenon, a small pupil, which does not respond to light, but contracts during the act of accommodation; and, more rarely, atrophy of the optic nerves. One other I may add to the early symptoms, though perhaps too much importance has been attached to it—the Brach-Romberg symptom, inability to stand firmly with closed eyes.

*Case 2.*—Mr. K., age 35, has had some difficulty in walking for about six years. He has also had slight bladder symptoms. Locomotor ataxia had been diagnosed. But the conditions present were quite different from those of locomotor ataxia. There was often a feeling of stiffness in the limbs. The patellar tendon reflex was exaggerated, and, another manifestation of excessive tendon reflexes, the foot clonus could be elicited. The three symp-



toms upon which I laid so much stress in connection with locomotor ataxia, lightning pains, absence of patella tendon reflex, and ocular symptoms, were not present. Another symptom, swaying of the body when trying to stand erect with closed eyes, was present. But too much reliance must not be placed on this symptom, as it is often misleading.

This patient has a different disease of the cord. In locomotor ataxia the posterior columns are the chief seat of disease. In our patient there are changes in the antero-lateral columns, what is commonly termed lateral sclerosis. Its usual symptoms are altogether motor, paralysis, with oftentimes rigidity or spasmodic contraction of muscles, and exaggerated tendon reflexes.

It may appear to the superficial observer that there is little practical difference whether the disease is limited to the posterior or lateral columns, that a nice diagnosis is of no consequence to the patient. But, in fact, it is a matter of much consequence. Not only are the subjective symptoms of locomotor ataxia severe, while those of lateral sclerosis are insignificant, but the prognosis of the latter is decidedly better.

*Case 3.*—Mrs. N., age 30, four years previous to my seeing her, observed some weakness in the lower extremities, so that she was unable to lift the feet in walking as well as formerly, could not arise easily from a sitting to a standing position, etc. The weakness subsequently invaded the muscles of the trunk and of the upper extremities. The deltoids, the biceps of the arms, and the quadriceps femoris of both sides, as well as many of the muscles of the back were almost completely paralyzed. Especially noticeable was the patient's method of arising from a sitting to an erect position. She succeeded in extending the knees by pressing with the hands upon the thighs, and then raised the trunk with the assistance of a chair or other external support. In this effort a remarkable curving of the spine in the lumbar region was produced, presenting an appearance as though there were no unyielding parts about the spinal column, and led to the suspicion on the part of one of the physicians who saw her, that she had disease of the vertebrae.

But a diagnosis in this case ought to have been readily made. There was in addition to the paralysis, atrophy of the muscles, and, a point upon which too much stress can not be laid in connection with the diagnosis of such cases, a loss of electrical contractility in the affected muscles. The atrophy and altered electrical reaction of the muscles, together with the history of gradually extending paralysis, were quite sufficient to establish the diagnosis of progressive muscular atrophy, though in this case the manner of development of the disease was an unusual one.

### THE ACRO-NEUROSES.—FUNCTIONAL NERVOUS AFFECTIONS OF THE EXTREMITIES.

By C. L. DANA, M. D., Prof. of Nervous and Mental Diseases, New York Post-Graduate Med. School.

From the *Medical Record*:—*Paræsthesia*.—Under the head of paræsthesia are included the sensations of prickling, numbness, burning, etc., which are familiar to every physician. Some have given a special name to that variety of paræsthesia in which there is an intense burning sensation. Mitchell calls it *causalgia*, and finds it to be the result of nerve injury. It is safe to say that an intense persistent burning indicates some organic peripheral nerve trouble. We can hardly say this of the milder "burning sensations," which are simply to be classed with ordinary rheumatic or neurasthenic "paræsthesia." This ordinary type of functional paræsthesia occurs oftenest in women, and at about the time of the climacteric. The patients experience annoying sensations of numbness, prickling, or burning in the hands, arms, or, perhaps, feet. The symptoms are worse at night, but generally continue through the daytime. There may be a slight loss of power in the arms.

Paræsthesiæ of course occur in organic diseases of the nerve-centres or nerves. Sometimes, also, these symptoms are brought on by lead-poisoning (Putnam), or by arsenic (Seguin), or by alcohol or tobacco. These facts

must be borne in mind in making a diagnosis. When the symptoms are very severe and persistent we should always suspect a toxic or infective neuritis. Many ordinary cases of ignipedites are caused mechanically by badly-fitting, or thin-soled shoes, or by long standing or walking.

The treatment for neurotic cases is in the use of strychnia, bromides, alkalies, and electricity, galvanism being, I think, far the most efficient form. For the rheumatic types, oil of gaultheria, potassium iodide, and electricity may be given. Hot and cold douches to the parts are often excellent. Of course, attention must be paid to general hygiene.

*Ignipedites*, or "burning feet," technically speaking, is the name given to a disease observed among soldiers in India in the early part of this century, and first described by Dr. Grierson. The disease is a depressive, constitutional one, resembling in some respects, scurvy. Later investigations have shown its close relation with acrodynia, and beri-beri. In all three of these diseases an intense and agonizing burning in the soles of the feet and sometimes in the hands is observed. Beri-beri is known to be an infective multiple neuritis. Ignipedites is doubtless also caused by a neuritis.

*Acrodynia* (cheiropodalgia) is a term employed to designate a peculiar disease, generally epidemic and characterized by severe pains in the extremities. It was first observed as an epidemic in Paris in 1828. It is probably an infectious multiple neuritis—a view suggested by Broussais.

Acrodynia is a disease which has not been observed in this country to my knowledge, although the term has been wrongly used to indicate a painful neuralgia of the finger (Pancoast, *Philadelphia Medical Times*, 1872).

*Hyperæsthesia and Neuralgia of the extremities*.—Both feet and hands are subject to hyperæsthesia and to neuralgic pains. A hyperæsthetic condition may exist entirely apart from any paræsthesia and neuralgia, although these latter are generally associated with it.

*Hyperæsthesia* in a most marked form has been observed in chronic alcoholic poisoning. Plantar hyperæsthesia not rarely occurs as the result of mechanical causes, from wearing thin-soled or ill-fitting shoes.

Some cases of plantar hyperæsthesia in which the trouble appears to be a pure neurosis are reported.

*Neuralgia of the feet and hands*.—These seem to be of two classes: Reflex neuralgias, and neuralgias due to some mechanical fault in the foot. Under this latter head come Morton's luxation neuralgia, and the so-called Tarsalgia, or Policeman's disease. It is a question whether there is such a disease as the pododynia or tailor's neuralgia, described by Gross in his "System of Surgery." I know no one who has ever seen it or reported a case.

*Tarsalgia* (*podalgia, policeman's disease*) is a neuralgic affection, due probably in most cases to an incipient flattening of the foot, and stretching of the plantar ligaments. Some have ascribed it to a deep-seated contusion of the adipose cushion covering the os calcis. Probably the condition varies somewhat in different cases. It is observed in persons who have been in the habit of going barefoot, and have then gone into the army or taken civil positions obliging them to stand or walk a great deal. It occurs also in the Policemen of Paris.

**SECRETORY ACRO-NEUROSES.**—*Moist or dripping hands* are frequently observed in persons of nervous temperament, whether men or women. Sometimes the palmar hyperidrosis is so great as to be very annoying, and patients apply simply for relief of this symptom. A moist, dripping hand is often observed after nerve injury. Many persons suffer all their lives with a disagreeable palmar and plantar hyperidrosis. The latter is often combined with bad odor, due to decomposition of sweat. In some persons who suffer from this latter complaint the condition is congenital. If the trouble comes on in youth or adult life it is because of some causes that have produced a depressive nervous state. The remedies here are, therefore, general tonic measures and careful local treatment, with the use of antiseptics and astringents as described in dermatological text-books. Unless the trouble is excessive I do not find that patients will carry out a treatment very long. Hydrobromic acid comes as near a specific as anything. Strychnine, quinine, and atropine, with regular mercurial purges, should also be tried.

## SOME OF THE NEGLECTED OR NOT DULY APPRECIATED PSYCHICAL PRECURSORS OF BRAIN DISEASE.

By C. H. HUGHES, M.D., St. Louis.

From the *Kansas City Medical Record*:—The precedent of all grave cerebral disease is neuratrophia, or defective nerve nutrition. Neuratrophia may, in a sense, be considered as functional, to distinguish it from organic disease; i. e., it may be so slightly organic as to not necessarily excite alarm for such seriously destructive change as tends to a speedy and grave destruction of physiological function.

The essential psychical symptoms of general functional neuratrophia, which are precursory of brain break-down, and which by long continuance, unrelieved by curative treatment so often ultimate in destructive conditions—are now to engage our attention.

Impending brain failure is seldom manifest on the psychical side—indeed, I doubt if it ever is,—without some mental changes.

The bold business man becomes timid and overcautious, or the discreet man becomes indiscreet and somewhat reckless in his business transactions without adequate appreciable cause.

Timidity unnatural to the individual, a shrinking from undertakings which, in better states of brain tonicity, would have been entered upon with reasonable confidence and courage, is a sign of more value than has been attributed to it.

Unnatural timidity, irresolution, and fear should always engage our attention, and the victims of them should have our advice long before any particular organ of the system fails. This is the most important fact for the general practitioner to consider.

A recuperative therapy should be advised in rest, recreation, and change of mental occupation and environment. These morbid fears, and the irresolution and timidity which underlie them, are but the shadows (if unaverted) cast before the graver coming events in the accepted symptoms of insanity. Neuratrophia underlies almost all insanity.

### HEADACHE.

From the *Med. and Surg. Rep.*, editorial:—It is such a common thing to hear a person say, "I have a headache," and it is as equally common to hear the reply, "It will soon pass off," and we so constantly find such recommendations for its relief as a cup of tea, or a nap, or "vinegar and brown paper," and we so seldom inquire into the cause, unless the headache is so continuously persistent or some other prominent symptoms imperiously force our attention to a close examination, that we reproduce the following remarks from the *Lancet* as well worthy of careful consideration.

Headache, although so common an affection, possesses a peculiar interest on account of the tantalizing obscurity in which its cause is often shadowed.

Among the forms but recently described and named, though probably as old as art, is the 'academy headache.' Critics and doctors have vied with one another in trying to translate this term according to the rules of medical logic, but have not, so far, been able to agree as to its meaning.

It should, however, be noted that all do not suffer from this form of headache; while of those who do, some are less and some more affected. Fatigue may be the limit of annoyance with a certain class. They are heavy-limbed and heavy-headed, languid, but no more. The forces at work upon them are the warmth of the crowded room or gallery, the summer sunshine pouring through the skylights, the listless rotation or circulation, rather than walking, through the rooms, and the weariness of much-divided attention. Being robust and used to go about upon their feet, they soon lose the feeling of languor after its causes cease to act; and if their eye-sight be equally healthy, they suffer no strain in these organs. There are other persons, of weaker organization or more sedentary habits, in whom pain quickly follows fatigue, and it is felt, for certain reasons, chiefly in the head. Among these reasons we must note the fact that in the standing position the

blood, driven by a languid heart, reaches the head with greater difficulty than when recumbent. Anæmia is one cause of headache. Anæmia, too, is associated with changes of arterial calibre which constitute the usual cause of megrim. Under these conditions, also, the giddy malaise of a loitering gait is painfully perceptible. Concentrated attention increases the uneasy sensation. The frequently constrained position of the head has its influence. It would be strange, moreover, if ocular movements had no share in the production of this complex indisposition. Ocular pains of this kind are felt as an aching about the middle and back of the head. The scrutiny of paintings or engravings, from the many points of interest which have to be noted, requires a considerably greater exercise of the muscles of the eyeball than is called for in ordinary life. In this fact, established, as we have already stated, on a basis of fatigue and general muscular and nervous strain, we have probably the usual exciting cause of the form of headache we have been discussing.

## DISEASES OF THE ORGANS OF RESPIRATION.

### THE INFLUENCE OF THE RECENT VIEWS OF THE ÆTIOLOGY AND MORBID ANATOMY OF PULMONARY PHTHISIS ON ITS CLIMATIC TREATMENT.

By ALFRED L. LOOMIS, M.D., LL.D., Prof. of Path. and Practice of Med. Univ. City of New York.

From the President's Address before the Amer. Climatological Ass'n, *N. Y. Med. Journal*.—There has, perhaps, never been a period when there was so great uncertainty in the minds of the profession in regard to the ætiology and morbid anatomy of phthisis as the present. For one class of observers pulmonary phthisis is an inflammation of the pulmonary substance, which may or may not be complicated by tubercle. Another class maintain that tubercle is the primary and essential lesion of all phthisis. Still more recently certain investigators maintain that there is a specific material which may or may not be accompanied by the histological elements of tubercle, but which always has a specific form of bacillus as the sole exciting cause of its development.

Whatever conclusions may finally be reached as to the exact nature and cause of phthisical processes, clinically we must always recognize two varieties of phthisis:

*First*, acute phthisis, the morbid changes of which are a complex of inflammation and the rapid development of tubercular tissue in the lung substance.

*Second*, chronic phthisis, the essential pathological changes of which are consolidation and induration of lung substance; tubercle may or may not be its primary lesion, but it is usually present in its advanced stages. During the past two years my own examinations of the lungs of those who have died with the clinical history of chronic phthisis have convinced me that, in advanced phthisical processes, tubercular tissue can always be found, but I am not prepared to state that the development of tubercle is the primary lesion in all or in the majority of cases.

In very many I am confident that a non-specific infiltration of the lung precedes tubercular invasion and furnishes suitable soil for the development of tubercle, as well as for the growth and multiplication of tubercle bacilli when they are present.

Koch's statements that the repeated entrance into healthy lungs of small numbers of the specific bacilli of tuberculosis will cause chronic phthisis, and that the simultaneous admission of numerous bacilli will produce acute phthisis, stand as yet unproved. As Beichart and Segel state, it remains to be shown how and when, in any individual case, the microbes effect their entrance into the system, or why their entrance takes place so readily in one case and not in others. Why do a large number of persons resist their entrance under seemingly the most favorable conditions for their introduction?

If phthisis has its origin in an infection, it seems evident, from a clinical as well as a pathological standpoint, that certain preparatory tissue-changes must take place in the lungs before the infection can be received, or, in other words, before bacillary invasion can become effective. Both experiments and observation seem to show that these bacilli, whether developed inside or outside the body, cannot thrive unless certain conditions are present. We ought to welcome every new method of investigation, and do nothing to discourage the boldest flights of pathological speculation. But the crucial test for all such speculation must always be a clinical one. We must hold rigidly to facts drawn from direct observation during life, to our clinical facts, and never endeavor to interpret them so that they shall accord with either our speculations or our theories. By this standard there are three factors which may be regarded as preparatory to the phthisical infection, if such infection shall be found to exist:

*First*, a state of constitutional feebleness, either inherited or acquired, which diminishes the resisting power of the individual and renders him abnormally susceptible to diseased processes.

*Second*, a condition of the upper portion of the lungs, marked by feebleness and slowing of the circulation, which predisposes the individual to phthisical processes.

*Third*, the establishment of localized inflammatory processes in the bronchi, lung substance, or pleura.

I think no one will question that the treatment of phthisis which is to-day attended by best results is that which has for its object the invigoration, by every means possible, of the general health, and the avoidance of those conditions which predispose to or favor local pulmonary inflammations. If we appeal to clinical medicine and ask how these therapeutical indications are best reached, the unqualified reply is, by good hygiene, good food, a suitable climate, and those medicinal agents which promote and maintain that normal performance of the digestive and assimilative processes which is essential to healthy nutrition. At the present day I think that the majority of careful and unprejudiced observers are united in the opinion that the most important of these agents is a suitable climate, which acts therapeutically in arresting early phthisical processes in two ways:

*First*, by its invigorating effects on the general system and its power of improving defective nutrition.

*Second*, by its local effects in preventing diseased processes in the lungs, and in arresting such processes after they are developed.

Before proceeding further, let us inquire what we are to understand by the term climate. After giving the views of Parke, Jaccoud, Billings and others, Dr. Loomis says:—But purity of atmosphere and consequent freedom from germs seem to me to offer a more satisfactory solution of this much vexed problem. In the presence or absence of these organisms is to be found an explanation of the therapeutic differences in the air of different localities.

Another climatic condition which, I believe, is as essential as altitude to purity of the atmosphere in any locality is porosity of soil. In localities where the soil drains slowly and imperfectly there is a peculiar dampness which acts most powerfully in developing phthisis.

The presence of extensive evergreen forests has been found to have a powerful purifying effect upon the surrounding air. It is questionable if winds purify the atmosphere of a locality; that they act prejudicially upon phthisical invalids is sustained by the experience of most observers. There are observations which show that ozone, or that electrical condition of the atmosphere in which it is present, acts as a powerful purifying agent in the atmosphere—an oxidizing disinfectant. The air of a locality may not necessarily be impure because no ozone is present; yet the presence of ozone in the atmosphere of a locality is presumptive evidence that the air is optically pure.

As has already been indicated, there are from our present standpoint two important objects to be attained in the treatment of phthisis: *First*, to prevent the entrance of microbes into the lungs through the respired air.

*Second*, to maintain such a healthy condition of the pulmonary tissue as to prevent those abnormal changes in the lungs which may favor the development and activity of such organisms, if they have gained an entrance into the respiratory organs. The importance of maintaining a healthy condition of the lung-tissue is in danger of being overlooked in the earnestness with which attention is now being directed to the bacilli of tuberculosis. If we are to regard the presence of tubercle bacilli in the expectoration as essential to the diagnosis of a fully developed phthisical process in the lungs—and I am convinced, from my experience after very many examinations, that they are never absent—the important clinical question arises, Can the bacilli in diseased lungs be destroyed? Attempts in this direction have been made principally by means of antiseptic inhalations. I would not unfairly criticise such treatment, but I am convinced, from my own experience in this direction, that the clinical evidences of the effectiveness of such inhalations in destroying or diminishing the number of tubercle bacilli in phthisical processes are entirely wanting. It must be admitted, however, that the antiseptic treatment of disease is as yet in its infancy, and that our present methods are unquestionably imperfect. There is very great doubt if, by the methods of inhalation now in use, antiseptic materials ever reach the pulmonary tissue. It is doubtful, however, if an antiseptic inhalation should be brought in contact with the diseased lung tissue, if it would destroy or render inoperative the bacilli of tuberculosis.

If, then, we accept as trustworthy the views and statements of recent observers in regard to the ætiology and morbid anatomy of phthisis, it seems evident that its prophylaxis and rational treatment are very likely to be in the future very nearly what they are now, although we may give new interpretations to many of the agents which we are now employing.

In conclusion, gentlemen, permit me to urge upon you to be careful how you send phthisical patients from home while the disease is in active progress. During the period when there is active febrile disturbance most patients are best cared for at home. Always wait for a period of quiescence, which will certainly come in all cases of chronic phthisis during its first stage, before sending your patients far from home.

There is a tendency at the present day to send phthisical patients from home before sufficient time has elapsed to form any reliable opinion as to the probable course of the disease. I believe it is better—certainly it is safer—at first to keep our patients near us, where they can be more or less directly under observation. There are health stations near at hand, where most of the conditions exist which are known to exercise a favorable influence on phthisical processes. Never send patients in the advanced stage of phthisis, if the disease is in active progress, far from home to seek health. Let me also urge upon you the importance of keeping phthisical patients in the localities where they improve until they reach complete recovery.

### THE CLIMATIC TREATMENT OF PHTHISIS.

By HAROLD WILLIAMS, M.D., of Boston.

From the Proceedings of the *Mass. Med. Soc.*, 1885.—The writer said: Up to the present time there was no physiological evidence that any meteorological differences were of the least value in the treatment of phthisis, unless it was that the sea air, as experienced in ocean voyages, was better than all others in that it was warmer and purer, and presented slighter variations of temperature and humidity. But the writer pointed out that sea air was available for but very few. The clinical evidence had not yet proved one station or class of stations to be more efficacious than another. To sum up the conclusions warranted in the present state of our knowledge, patients sent away generally did better than those who remained at home, this being a matter of opinion rather than of statistical proof. He thought that the beneficial effect of this change of climate was due rather to the change than to the climate; that it was not to the meteorological differences

in climate, but to factors which all health stations might possess in common, that all were ineubated for their reputations. These factors he believed to be the change itself, the greater purity of the air, the increased facilities for open air exercise, and the improvement in the hygienic surroundings of the patient, consequent upon the greater attention paid to the habits of living. An ideal health station for this disease should be newly and sparsely settled; should possess a pure water supply and adequate drainage; should be of a dry, porous soil; should be favorably situated with respect to neighboring heights, marshes, and prevailing winds; it should be equable in temperature, and should possess the highest number possible of pleasant, sunshiny days. It should not be warm enough to be enervating, nor so cold as to interfere with a proper ventilation of the houses, or with out-door exercise. It should afford plenty of out-door amusement. It should not be crowded with consumptives, and it should be sufficiently unfashionable to admit of hygienic dress. Above all, it should afford suitable accommodations for the patient. The house should be carefully selected, the chamber of the patient should be large and sunny, and the food should be abundant, palatable, and varied. A health resort that offered these advantages in the highest degree would be found by experience to be the most suitable for a phthisical patient, let the barometric pressure, the aqueous vapor, and the "diathermancy" be what they might.

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#### THE NEW TREATMENT OF HAY FEVER.

From Ed. in the *Louisville Med. News*:—Of the many evidences of advancement which mark this era of progress in medicine none is more significant or promising of beneficent results than certain facts elicited by recent studies relative to the nature and treatment of hay fever.

The etiology and pathology of hay fever have been studied most assiduously, but, till quite recently, no observer has been able to throw any direct light upon its origin or nature.

Dr. Beard, in his well-known monograph upon this disease, comes, after careful and extended study, to the conclusion that it is neurotic in origin, but that a special or predisposing tendency must exist in the person attacked. Helmholtz, Salisbury and Cutter have traced its source, as they think, to a micro-organism.

The popular belief has always been that the disease is engendered through the inhalation of pollen from certain plants, occurring most frequently at a season of the year when many plants are in blossom, the air at the time being loaded with pollen grains which the winds and the insects are scattering on every hand. This condition of the air is known to bring on the attack in some individuals, while it is also observed that all specific symptoms disappear if the patient be removed from the presence of the offending particles. But all former theories of the causation of hay fever were defective (as has been clearly pointed out by Roe), in that they did not take into consideration the local condition of the nasal chamber.

Attention seems first to have been attracted to lesion or derangement in the nasal walls as a possible cause of this disease by Daly, of Pittsburgh, who observed that certain cases of chronic naso-pharyngeal catarrh, with hypertrophy of the turbinated tissue, were complicated with hay fever, and that in removing the hypertrophies for the cure of the catarrhal condition the fever was also cured. Later this fact was developed with full emphasis by Dr. Roe, of Rochester, N. Y., who showed conclusively that by the removal of the hypertrophied cavernous structure of the turbinated bodies, attacks of hay fever in persons subject to the disease could be forestalled. Some cases of the disease, however, showed no hypertrophy of the turbinated tissue, but in these a careful search of the nasal cavities revealed a sensitive spot, which on irritation, excited reflex symptoms simulating the hay fever paroxysm. It was further found that by destroying this sensitive area, that the victims of the disease were given full immunity from their wonted annual attacks.

Since attention was thus forcibly directed to the nasal cavities as the seat of the specific lesion in hay fever, evidence of the soundness of the theory has rapidly accumulated.

The latest and most conclusive testimony to the point may be found in an essay read before the Philadelphia Laryngological Society, by Dr. Chas. E. Sajous. This author claims that the following conditions are essential to the production of this disease: (1) An external irritant. (2) A predisposition on the part of the system to become influenced by this irritant. (3) A vulnerable or sensitive area through which the system becomes influenced by the irritant. This brings into harmonious accord the only rational views which have so far been held as causative in hay fever, namely, the pollen, the neurotic, and local theories.

Mackenzie, by a series of experiments on numerous hay fever subjects, was able to locate a sensitive area at the posterior end of the inferior turbinated bone, with another on the septum opposite this point.

Sajous has further found a similar spot situated in the partition of each nasal cavity, near the anterior boundary of the vestibule.

In the treatment of numerous cases this surgeon has been so uniformly successful that he now maintains that by the removal of all hypertrophies and other obstructions from the nasal passages, and by cauterization of the hyper-esthetic areas, the "medium of communication between the external irritants and the systematic dyscrasia is removed, and a paroxysm of 'hay fever' becomes impossible." Treatment should be commenced at least six weeks before the onset of the expected paroxysm.

That the successful treatment of hay fever is now within the reach of all seems not to admit of reasonable doubt. By the removal of all offending growths from the nasal passages and the complete destruction of the sensitive areas, which, since the introduction of cocaine, may be accomplished without discomfort to the patient, success would seem to be assured in every instance.

## AN ATTEMPT AT THE RADICAL TREATMENT OF TUBERCULOSIS.

By J. T. WHITTAKER, M.D., of Cincinnati, Ohio.

From the *Jour. Amer. Med. Ass'n.*:—Pathologists recognize the frequency of recovery from attacks of tuberculosis of the lungs. When patients once thus affected die of other or intercurrent disease, characteristic cicatrices or calcareous condensations are found in the lungs, along with adhesion of the opposed pleuræ.

It would therefore seem rational to endeavor to induce or hasten such processes during the course of the disease, with the hope of destroying its cause (perhaps by preventing the nutrition of it), or at least to oppose a bar to its further progress. The possibility of such a procedure would seem all the more justifiable for the reason that the disease is and remains, in most cases, for a long time quite strictly circumscribed. It may be taken for granted that every one now believes the disease to be a mycosis. With the double purpose of directly addressing the cause of this disease with an antimycotic agent, and of producing the irritation which might result in proliferation of the connective tissue of the lungs, I have made a number of parenchymatous injections into the lungs with solutions of the mercuric bichloride of varying strength. A number of experiments of similar character were made by Hiller, of Berlin, with negative results, but I have been stimulated to repeat these experiments with the modification in the solution suggested by Stern, in the hope that by rendering the remedy less irritating to the lungs, I might be able to use a larger dose.

I took the precaution, in making these experiments, to select only such patients (with one exception), in whom the disease existed in what is commonly called its first stage, with at most apical consolidation of the upper lobe. I did not venture upon the use of this remedy where undoubted evidence of softening existed, or where cavities could be appreciated in the lungs.



[The essayist here related his observations upon five patients carefully selected, where accurate thermometric records were kept and all points of history noted with regard to cough, night-sweats, appetite, condition of bowels and weight. The bichloride was injected daily at a depth of four to six inches, in quantities varying from 1.32 to  $\frac{1}{4}$  grain. At the same time all the patients inhaled from an atomiser a solution of the bichloride with common salt three times daily for five weeks. There was, as a result of this treatment, no change whatever in the course of the disease. What fluctuations were observed were of the same character precisely as before.]

But the question arises whether the destruction of a large mass of bacilli tuberculosis will cure the disease. Will not a few which must, under any circumstances escape, continue to multiply as before? Or will not the soil remain just as fertile to the reception of new seed? The mycologists themselves do not, as a rule, look with favor upon experiments of this kind. Yet clinicians can never be content with prophylaxis alone. There is still hope of effecting, by drugs, such chemical change in the lung tissue as will make it infertile to the growth of the bacilli, as will bring about the conditions which takes place in the process of natural recovery.

#### IS TUBERCULOSIS TRANSMISSIBLE THROUGH THE SPUTUM ?

Sirena and Pernice have carried out a series of experiments on rabbits and guinea-pigs concerning the transmissibility of tuberculosis through the agency of tubercular sputu. Their conclusions are: (*Gazet. degli. Ospitali*). (1) The liquid obtained by the evaporation of tubercular sputum is always free from Koch's tubercle bacillus; therefore, when placed upon the cornea, injected into the subcutaneous cellular tissue, or into the peritoneal cavity, it does not give rise to tubercle. (2) Tubercle bacilli do not rise in an atmosphere moving over moist tubercular sputa, even when the sputa are very rich in bacilli. (3) The respiration for several hours, or even for several days, of tubercular exhalations does not give rise to phthisis in animals. (4) Animals obliged to respire an atmosphere charged with the dried dust of tubercular sputum do not catch phthisis. (5) The subcutaneous injection of tubercular sputum produces for the most part a specific abscess, as is proved by the presence of the tubercle bacillus in the pus; then, after a variable period, it produces tuberculosis of the abdominal and thoracic organs. (6) Injection of tubercular sputum into the peritoneum produces at first local and then general tuberculosis, capable of successive inoculations in animals. (7) The injection of solutions of tubercular sputum into the trachea, even in animals affected with broncho-pneumonia, does not cause a specific infection, but for the most part a septic croupous pneumonia, characterized by the existence of micrococci in the exudation.—*Medical Record*.

#### CHRONIC NASO-PHARYNGEAL CATARRH.

By LONGSTREET TAYLOR, M.D., Asst. to the Chair of Laryngology of the Med. Coll. of Ohio.

From the *Cincinnati Lancet, and Clinic*.—Chronic nasopharyngeal, or American catarrh, as it has been named by Morell Mackenzie, on account of its great prevalence among the inhabitants of North America, has its seat, as indicated by its name in that portion of the pharynx situated above the soft palate. Oft recurring irritations of the pharynx usually precede the establishment of the disease. The patient has always taken cold in the head very easily, has been addicted to highly seasoned food and irritating drinks, has been an inveterate smoker (especially of cigarettes) or chewer, or has been at work in overcrowded, ill-ventilated and dusty factory rooms. It seems also to be the result of much public speaking, especially in the open air, although Scheck denies that this has any bad effect upon the naso-pharyngeal space.

The treatment of the disease is far from satisfactory. Constitutional remedies cannot eradicate it, although by building up the patient's general health they become a powerful auxiliary to the local measures. In a large per cent. of the cases the disease is complicated by dyspepsia with acid eructations, which usually yields to muriatic acid.

The first step in local treatment is to secure thorough cleanliness of the parts. This is by no means a simple task. Beverley Robinson has shown that Weber's douch does not and cannot do this satisfactorily. A brush bent almost at right angles to the direction of the handle, which must be strong, can be introduced well into the space but cannot be applied to all recesses with accuracy. A thorough syringing of the cavity or a patient use of the spray are the most satisfactory. The best solution to use is the composite alkaline wash of the London Throat Hospital Pharmacopœia composed of equal parts of the bicarbonate, biborate and chloride of soda, and a portion of white sugar. If the patient have a foul breath the addition of a small quantity of carbolic acid, the permanganate of potash or some other disinfectant as indicated.

The bichloride of mercury wash acts excellently. *R.* Hydrarg chlor. corr., gr. i; alcohol, ℥ i; aquæ, ℥ iij.

If any erosions are present it has a slight caustic action. Donders says that mercurial applications contract blood vessels. This may be the explanation of the very beneficial results which follows its use in some cases.

Occasionally in old atrophic cases the mucus can most quickly be gotten rid of by rapidly scraping over the walls with a small wire curette.

The space having been thoroughly cleansed is in a condition to receive any local treatment which may have been decided upon.

Finally, any success that is to be attained in the treatment of this malady is only to be gained by perseverance on the part of the physician as well as the patient. The physician must give his time and personal attention to the case and not trust either the cleansing or applications to the patient or his friends. The patient must be prepared to submit to unpleasant manipulations, and unless he does so he makes a difficult case well nigh impossible to cure.

## DISEASES OF THE ORGANS OF CIRCULATION.

### THE INFLUENCE OF COCAINE, ATROPINE, AND CAFFEINE ON THE HEART AND BLOODVESSELS.

H. G. BEYER, M.D., U. S. N., according to a paper on the influence of cocaine, atropine, and caffeine on the heart and bloodvessels, published in the *Amer. Jour. of the Med. Sciences* finds: (1) That cocaine is exceedingly prompt and uniform in its effects upon the heart. (2) In small doses it is a powerful stimulant to the heart's action. (3) In medium doses it has an inhibitory influence over the ventricular contractions. (4) In large doses it produces diastolic arrest, from which, however, the heart may be recovered under suitable conditions. (5) In small or large doses it produces contraction of the bloodvessels, independent of the central nervous system. (6) A rise in the blood-pressure, consequent upon the administration of cocaine, is due to a direct action of the drug upon the heart and bloodvessels, stimulating the former and constricting the latter; a fall in blood-pressure coming on after the rise, must be accounted for by the action of cocaine on the heart alone, since its constricting influence on the bloodvessels outlasts the stimulating influence it exerts over the ventricle of the heart.

(1) That *atropine*, in certain doses, increases the rate of beat of the heart, and also the amount of work done. (2) That it exercises an inhibitory influence over the contractions of the ventricle. (3) That it first causes a contraction and afterward a dilatation of the bloodvessels. (4) That cocaine acts on atropized vessels in the same way that it does on normal ones, *e.g.*, it causes their contraction.

That *caffeine* in small as well as large doses produces dilatation of the bloodvessels in the *terrapin*; any rise in arterial pressure due to *caffeine* is, consequently, to be explained only by the stimulating effect *caffeine* exerts on the heart itself.

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### RUNNING TO CATCH THE TRAIN.

From an editorial in the *Med. and Surg. Reporter*, Aug. 1885.—Within a few months past the writer has noticed several papers upon this subject, two of which were in the *Reporter*. As this is the time when travel on railroads is, perhaps, at its height, a few remarks upon this matter may not be amiss, as every one must know that desperate, at times frantic, efforts are daily made to catch the train. To a certain extent, as when important business must be transacted at a certain period, or when various events of public, or social character occur, some allowance must be made for injudicious haste.

In many cases the efforts to catch a train cannot well be exceeded by the professional runner, whose reputation and pecuniary interest are at stake in a race. The danger of sudden death in these cases may not be great, and, if fatal, would probably not be made known in many instances, while a death from lightning, or hydrophobia, would be noticed by the papers generally. The danger is chiefly in regard to those who are either prone to affections of the heart, or who have, in fact, symptoms of some of the various maladies to which it is subject. In such cases a single effort of the kind alluded to may prove to be the efficient cause of a most serious aggravation of the affection, and may terminate suddenly in death, or greatly increase the trouble, that may continue for months or years.

In this connection, an instance of sudden death, occurring within the knowledge of the writer, may be alluded to: A gentleman, aged forty-eight years, in company with his two nephews, went to Atlantic City on Saturday, intending to return by the early morning train on the following Monday. Some delay prevented their going to the station earlier, and, as the time of departure was near at hand, they walked rapidly. Another man ran past them, and, looking back, said "they would miss the train unless they ran." They at once began to run with great rapidity, but arrived only in time to see the train move away. The uncle, whose family the writer had attended during many years, and who had never had any sickness, sat down, but in a moment he arose, drew forth his pocket-handkerchief, wiped the sweat from his brow, saying "he would not like to run that way again," and instantly fell down, and in less than a minute life was extinct.

It should, however, here be stated, that although remarkably healthy, he was excessively fat, and, unfortunately for him in this case, was exceptionally active—capable of running very rapidly.

In view of the fact that instances of injury of a serious character must be of frequent occurrence, and at times of fatal import, it would seem to be of importance to remind the public, either by medical or other publications, of the danger to be incurred by these rash efforts to catch the train,

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### PURULENT PERICARDITIS—EMPHYEMA.

From the *Trans. of the N. Y. Path. Soc.*:—Dr. THAYER also presented the heart and pericardium of a man about forty years of age, who entered New York Hospital with obscure pulmonary signs early in December last. He was thought to have pneumonia, and many of the symptoms characteristic of pneumonia were present, such as bloody sputa, high temperature, etc., but notwithstanding this the patient appeared to be doing very well. Within a few days, however, the case took an unfavorable turn, the pulse grew weak, emaciation occurred, there was afternoon elevation of the temperature, respirations from twenty-five to thirty in the minute, and the pulse above 100 constantly. The change from bad to worse was rapid, and the

patient died without special symptoms. Repeated physical examinations of the chest had been made, and the area of cardiac dulness had been carefully noted many times during the patient's illness up to twelve days before his death. He complained of a feeling of compression of the chest which had led to the suspicion of pericarditis, but nothing, however, was found to indicate its existence.

At the autopsy the right pleural cavity was found half filled with thick creamy pus, and the lung showed evidence of recent pneumonic process which had nearly disappeared. The pericardium was distended, and contained a large quantity of pus. All over the visceral surface of the pericardium was a thick layer of pyogenic membrane, continuous with a similar layer over the parietal pericardium. The chief interest in the case centered in the fact that, although careful examination was repeatedly made, pericarditis was not diagnosed.

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### RUPTURE OF THE HEART.

Dr. H. NELSON HARDY in the *British Medical Journal* reports a case of spontaneous rupture of the heart in a woman, aged 19, who was apparently healthy when she went to bed on the night before her death. She had had an attack of rheumatic fever when 15 years old, but had not lately complained of feeling ill. She had no fainting attacks, nor was there any arcus senilis present. A slight loss of memory had been noticed quite recently.

On March 17th, 1885, a little before 7 a.m., he was sent for to see the patient, who was said to be dying, and found her lying in bed on her back, insensible, almost pulseless, her eyes closed, and pupils widely dilated. In a quarter of an hour after his arrival, the heart had ceased to beat.

Autopsy thirty-two hours after death. On opening the pericardium, there was seen on the anterior surface, near the apex, a slit fully one inch and a half long, which led into the *left ventricle*, and extended irregularly upward toward the septum. Slight pressure on the heart caused fluid blood to pour out through this opening into the pericardium, in which there was previously about an ounce of colored serum. Several of the chordæ tendinæ were also found ruptured, and the aortic valves were incompetent through old adhesions. The lungs were congested, but not diseased; the liver was adherent to the diaphragm; the stomach was healthy, and contained partially digested food; the other organs were healthy, and the uterus unimpregnated.

The special points of interest in the case are the youth of the patient, and the almost total absence of any indication, during life, of fatty degeneration.

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### HYPODERMIC INJECTIONS OF BLOOD.

In the *Deutsches Archiv f. Klinische Medicin* there is reported by v. Ziemssen a series of cases in which good results came from frequently repeated hypodermic injections of defibrinated human blood, 50 c.c. at each operation. Generally the amount (about 12 drams) was distributed by two points of injection. Antisepsis was carried out and the blood distributed in the meshes of the connective tissue by massage. No local inflammation, or fever, or hemoglobinuria ensued. The fact of the resorption was determined by the improved, general condition and by previous and subsequent spectroscopic analysis of the hemoglobin of the patient's own blood. After every injection the amount of hemoglobin rose to a maximum within the first twenty-four hours; gradually thereupon the proportionate amount became less again, but the final amount still remained higher than before the injection. Thus by successive hypodermic treatments a normal per cent. of hemoglobin may be attained. v. Ziemssen recommends this perfectly harmless proceeding in cases of dangerous anemia from various causes, also in leukemia, pseudoleukemia, poisoning by illuminating gas, carbonic oxide, etc.—*Weekly Med. Review*.

## INTERMITTENT PULSE.

Dr. B. W. RICHARDSON, of London, believes that alcohol is the one reliable remedy for this affection. He also has found beneficial in similar cases the administration of one-third of the following mixture, three times a day, when the patient abstains from alcohol and has no organic disease of the heart:

R. Spt. chloroform; spt. ammon, arom, ℥ss, 3i; aquæ camphor, ʒi.  
Mix.—*Maryland Med. Jour.*

## DISEASES OF THE ORGANS OF DIGESTION.

## LEUCOPLAKIA BUCCALIS ET LINGUALIS, OR ICHTHYOSIS LINGUÆ.

By E. FLETCHER INGALS, M.D., of Chicago, Prof. Laryngology in the Rush Medical College.

From the *N. Y. Med. Jour.* :—This disease has been recognized but a short time, and very little can be found upon the subject in general medical literature.

*Definition.*—*Leucoplakia buccalis is a chronic affection of the buccal mucous membrane, characterized by thickening of the epithelium, and the formation of white, opaline, elevated patches, which usually become fissured and painful, and, after continuing for a long time, are likely to terminate in epithelioma.*

*Anatomical Characters.*—The patches are generally found on the dorsum of the tongue or the inner surface of the cheek and lips, but seldom, if ever, on the lower surface of the tongue or behind the anterior pillars of the fauces, and they are limited to the buccal cavity.

They may be seen in one or more small, irregular, or oval patches, or these may have become confluent.

*Causation.*—Excessive tobacco-smoking is ranked as one of the most frequent causes of the disease, but it is barely possible that prolonged irritation of any character may have a similar effect on those predisposed to it. It has occurred almost entirely in males over forty-five years of age.

*Clinical History.*—It is also difficult to determine exactly the duration of the disease, for it has generally been discovered accidentally; but usually it will be found to have existed for months or years when the patient first presents himself. This is due to the fact that at first the affection causes no inconvenience.

In the cases associated with syphilis and in those that have developed into epithelioma the parts become greatly swollen, and deep, fungous ulcers occur which may erode vessels and cause serious hæmorrhage. In these same cases the lymphatic glands are involved, but this does not occur in the earlier stages of idiopathic leucoplakia.

Often the first symptom noticed by the patient is simply an uneasy sensation; but this may not appear until the disease has existed for years. There are no constitutional symptoms until epithelioma is developed. Late in the disease, speaking, mastication, swallowing sometimes become difficult, especially when epithelioma occurs. In such cases there is also profuse and very troublesome salivation, which continues both night and day.

Upon examining the mouth in the early stages, several more or less oval red or white patches are usually found which are apt to be mistaken for secondary syphilis.

*Diagnosis.*—Leucoplakia is liable to be mistaken for what Guinaud has termed the "professional patches," found in glass-blowers, for "smokers' patches," mercurial patches, psoriasis linguæ, syphilitic patches, and epithelioma unconnected with leucoplakia. Cancer arising without previous leucoplakia is distinguished from the latter by its history. In cancer, the

induration of tissues and the final ulceration are not preceded by the chronic white patch, and are attended by more constant pain, with profuse salivation and a very offensive odor.

*Prognosis.*—The duration of the disease is uncertain.

Among the indications that leucoplakia is passing into epithelioma are: non-inflammatory enlargement of the lymphatic glands, with exfoliation of the thicker portion of the patch, the formation of an ulcer, the supervention of sharp pain, salivation, and at length induration of the subjacent tissues. Finally, great swelling in the region of the jaw is likely to occur, and death takes place from exhaustion.

*Treatment.*—In cases of leucoplakia all sources of irritation, particularly those resulting from the use of tobacco and alcoholic stimulants, should be at once removed, and if the digestive organs are deranged, as is frequently the case, they should receive proper attention. Aside from these measures, most authorities believe treatment of little or no avail.

S. James A. Salter reported a case, which seemed to have been leucoplakia, which was cured by extirpation and cauterization of the wound with the actual cautery. In the case which I report internal remedies did no good, and local applications of tincture of iodine, nitrate of silver, and the acid nitrate of mercury greatly increased the patient's sufferings, and would doubtless have aggravated the disease had they been persisted in; but, as soon as the actual (galvanic) cautery was employed, relief from all pain was obtained, and by a persistent, careful use of it the disease was eradicated.

From a study of the literature of this subject, and from my own small experience, I arrive at the following conclusions: (1.) Leucoplakia buccalis is an idiopathic disease, distinct from psoriasis, "smokers' patches," and syphilis. It is largely confined to men past middle life, but it occasionally occurs in women. (2.) The disease is so commonly found in inveterate smokers that the abuse of tobacco may fairly be considered as an exciting cause, though cases occur where tobacco has never been used. (3.) The affection is chronic and, finally, in a majority of cases, terminates in epithelioma. (4.) Internal treatment and the local application of sedative, stimulant, or caustic drugs are, in nearly all cases, either useless or injurious, and the latter are sometimes disastrous by hastening the development of epithelioma. (5.) The actual cautery or the galvano-cautery will probably enable us to cure many cases if they are treated sufficiently early, provided it is applied to only a small spot at each sitting, and carefully, so as not to destroy the healthy tissues beneath the changed epithelium.

### THE PROPHYLAXIS OF CHOLERA.

By J. A. S. GRANT (BRY), M.D., Cairo, Sen. Surg. Railway Administration.

From the *Medical Bulletin*.—Rules for the prevention of cholera. (1) Conform to and assist every measure of prevention put in operation by the authorities.

(2) Apply yourself to make your own home healthy by the instant removal of every nuisance about it and in it. See that your windows will open and shut so as to admit plenty of fresh air night and day. Every epidemic rages amid filth. Whitewash all your rooms, and water closets, and cellars. Avoid crowding your sleeping rooms.

(3) Having looked to your dwelling within and without, consider then what is best for your welfare in food and clothing. Be very careful not to drink impure water. To be quite safe, it ought to be filtered and boiled and then cooled for drinking purposes. Care should be taken to have the filter in an airy position, and not near any water closet; wash out the filter frequently.

Avoid drinking alcoholic beverages of every kind, unless your doctor considers that you require them. But five to ten drops of dilute hydrochloric acid may be drunk three times a day, as a prophylactic or preventive treatment.

Eat, as usual, a mixed diet, but avoid excess even of wholesome food. Do not take what you know to be difficult to digest. Fruit, only partially ripe, should be cooked before eaten, and all raw ripe fruits should be washed before they are put into the mouth.

A flannel bandage should be worn round the abdomen next the skin, so as to avoid a chill across the bowels. The rest of the clothing should be rather warm than otherwise.

(4) Avoid overfatigue and excess of every kind. Fasting and feasting are equally bad.

(5) When called upon to wait on a choleraic case, be careful not to touch what has been vomited or what has come from the bowels; for in these is the germ of the disease. To make sure of your being properly disinfected wash your hands in water with a little carbolic powder, and dust some of the powder also over your clothes.

Disinfect the patient also by dusting the carbolic powder from time to time on the bed and under the bedclothes, and do not throw down the water-closet what comes from the patient, but have it put into an earthenware vessel and mixed with chloride of lime and vinegar equal parts, and then some water added. Every two or three hours the contents should be buried in the ground. Of course, where there is no garden or ground it must, notwithstanding the risk, be thrown down the water-closet. But the fact that the infected material has been in a strong disinfectant mixture for a time renders it harmless, only one cannot always depend upon this process being properly carried out. Bury, therefore, when possible.

(6) *Disinfectants*.—The best disinfectant is (a) "pure air" and plenty of it. Persons and baggage coming from infected districts ought, therefore, to be isolated when they, by any chance come into a non infected district, and it is the duty of any one, who comes to know such a circumstance, that he should communicate it at once to the authorities. (b) Heat is the next disinfectant. It has been ascertained that the germ of cholera is destroyed by a heat of 140° F. Hence, if our food is well cooked and our drink boiled the danger of getting cholera in that way is removed, and it is well to understand that the evidence in favor of the communicability of cholera by means of water and food contaminated with the cholera germ is now overwhelming. (c) Carbolic acid of the strength of five per cent., either in solution or in powder, is a very good disinfectant, but weaker combinations are utterly useless. (d) Sulphurous acid fumes are the most potent volatile disinfectant known, and the easiest way of obtaining this disinfectant is to burn some ordinary sulphur in the place where the disinfectant is required. (e) Chlorine gas is obtained from chloride of lime by adding a diluted form of hydrochloric, sulphuric, or acetic acid. Ordinary vinegar may be used, mixing it with the chloride of lime in equal parts. Avoid, however, throwing this disinfectant down iron or lead pipes. (f) Permanganate of potash is a true disinfectant, oxidizing and destroying all contagious material as well as putrid matters; the best combination is as follows: B. Permanganate of potash,  $\frac{3}{4}$  iiii; hyposulphite of soda,  $\frac{3}{4}$  iiii; mixed with ten litres (two gallons) of water; then one-fifth of this to be put into a bucketful of water and thrown down the water-closet at least once in twenty-four hours.

(7) (a) The best way of disinfecting the clothing and bedding of a choleraic case is to burn them. If not burned, clothing may be baked or well boiled with soda. Before being sent to the wash house they should be steeped for half an hour in a five per cent. carbolic solution, or in a mixture of chloride of lime and vinegar, two ounces of each to every gallon of water. (b) To disinfect rooms, scrub floors with hot water and soft soap, which may contain five per cent. of carbolic acid. The walls and ceiling should be brushed and wall paper removed. The furniture, if iron, is to be washed with the carbolic solution and removed from the room. Textile fabrics should be baked, or boiled, or spread out in the room for fumigation. In the last case sulphur is the best medium. It can be lighted by pouring a little alcohol upon it, or by means of a live coal. Every thousand cubic feet of space requires three pounds of sulphur. The doors and windows of the room are to be shut till next day and then thrown open. Whitewashed

rooms in case of becoming infected should have the walls scraped and re-whitewashed. (c) The dead body of a choleraic patient should be dusted well with carbolic powder, and wrapped in a sheet saturated with a solution of one part chloride of lime and one part vinegar in forty parts of water, or have it washed in a ten per cent. carbolic acid solution, and then wrap it in a sheet saturated with the same solution, and have it buried as soon as possible.

### THE TREATMENT OF CHOLERA.

Prof. BARTHOLOW says as the cholera discharges are distinctly alkaline the universal outward osmosis can only be checked by the administration of an acid. He recommends for the preliminary diarrhœa: *R. Acidi sulphurici aromat., ʒss.; tinct. opii, deod., ʒss. M. Sig.*—Twenty drops in water every hour.

Or: *R. Acidi sulphurici, dilut., ʒss.; tinct. opii camph., ʒiss. M. Sig.*—A spoonful well diluted every hour or two.

Many prefer acetate of lead and opium in pill form or in solution. A favorite combination with others is spirits of chloroform, tincture of rhubarb, tincture of cinnamon, and tincture of opium.

Another efficacious remedy is the hypodermatic injection of morphia, gr.  $\frac{1}{4}$  and atropia gr.  $\frac{1}{16}$ . Mustard to the epigastrium or a fly blister will aid in the arrest of vomiting. Other remedies for the vomiting stage are carbolic acid, chlorodyne, camphor, chloroform and the hypodermatic administration of morphia and chloral. Both in this and in the algid stage Prof. Bartholow has obtained the best results from the internal use of sulphuric acid combined with the employment hypodermatically of morphia and atropia, followed by chloral. He considers chloral to be more efficient in the treatment of the later stages of cholera than any other single remedy. In desperate cases Prof. Bartholow recommends the intravenous injection of salines.

Prof. DaCosta says that success in the treatment of cholera depends in great measure upon the treatment of the preliminary diarrhœa. Check it and the general mortality will be decidedly lessened. Years ago he was impressed with the value of sulphuric acid in this stage. A valuable combination is—*R. Acidi sulphurici, dilut. ʒx; tinct. opii, deod. ʒx; aqua menth., pip. ʒij.* To be taken every fifteen to thirty minutes until the diarrhœa ceases.

If the case still go on, and vomiting, purging, with cramps and rice-water discharges occur, Prof. DaCosta says that the first and most important thing to do is to stop the patient from drinking any fluids whatever. The patient may be allowed to swallow small pellets of ice which will allay the thirst without overloading the stomach. The whole abdomen should be covered with a mustard plaster to lessen the cramps, nausea, and vomiting. Medically, capsicum, opium, and camphor are still to be depended on, but they had better be given in liquid form now, and in small, frequent doses.—*R. Tinct. capsici, ʒij; tinct. opii, deod., ʒx; aq. camph., ʒij. M. Sig.*—For one dose. To be repeated every half hour.

If the stomach be too irritable to retain the medicine, morphia may be given hypodermatically. Friction with dry mustard is invaluable for the cramps in the extremities. At times they are relieved in a marked manner by the hypodermatic injection of chloral, gr. xv-xxx, largely diluted.

If the various astringent remedies have failed to arrest the excessive secretion and the case is progressing unfavorably, experience has shown that the alternative plan may be resorted to with advantage. Some physicians advise repeated large doses of calomel. Prof. DaCosta has obtained more benefit from the administration of one dose of gr. v, to be followed by small doses of gr.  $\frac{1}{4}$ , every hour.

If collapse be impending, friction with hot mustard, hot turpentine, or hot whiskey, must be persistently employed, and small amounts of warm whiskey or brandy given every few minutes by the stomach or hypodermatically. The



hypodermatic use of caffeine, in gr. iss. doses, is warmly recommended by some of the most distinguished French therapists.

Prof. DaCosta is convinced that the best results in this apparently hopeless, stage will be obtained from the intravenous injection of salines. A very good formula for the solution is—*R.* Sodii chloridi, 3 j; sodii carb., 3 iij; aqua., ʒvi. *M.* Warm to the temperature of 180° F. and slowly inject ʒij per minute into a vein until ʒxl have been thrown in. If necessary ʒxl more may be injected after a short time, but it will not be advisable to exceed that amount.

## THE RELATION OF THE TEETH TO THE GENERAL SYSTEM.

By ANDREW G. FRIEDRICH, M.D., New Orleans.

In a paper published in the *New Orleans Med. and Surg. Jour.*, Dr. Friedrichs after directing attention to a number of affections influenced by the condition of the teeth, says:—Is it surprising, then, that the teeth should often be the unsuspected cause of general and particularly of nervous diseases? Consider how often the teeth are exposed to irritation from hot and cold drinks and aliments of all kinds. What morbid effects would likely arise from the putrid and acrid discharges from decayed teeth and diseased gums, when introduced into the stomach. I may also add, what influence these organs have upon perfect mastication, when in a pathological condition; and again the connection of mastication with good health. Imperfect digestion must follow, and you rarely find a person whose teeth are in a diseased condition, who is not a sufferer from dyspepsia, a disease which daily baffles the efforts of the doctor to cure, and few there are who have not experienced the sensations so graphically described by Cowper:

“I awake like a toad out of Acheron,  
Covered with the ooze and slime of melancholy.”

It is not strange that diseased teeth should produce dyspepsia; it is easily accounted for. In the first place, the food is improperly prepared for the stomach; secondly, the fluids of the mouth, constantly trickling into the stomach, impair its tone and vitiate its solvent secretions; and thirdly, a continual demand upon the system by the vain efforts which nature makes to cure the diseases of the teeth, and also the frequent and severe pain, diminish the nervous influence which the stomach receives, and impairs its powers.

Now, I have no doubt that our success in the treatment of a great many, if not all chronic diseases, would be greatly promoted if we would only direct our inquiries to the condition of our patient's teeth—advising their treatment when diseased. It is not necessary that there should be the slightest pain or even one symptom that would attract our attention to the offending organ. Splinters and tumors and other irritations have caused disease and death, and were unsuspected as the cause. Translation of sensation and motion from parts affected to parts remote seems to be an original law in the animal economy.

All this is no issue of yesterday. Tissot, who wrote nearly a century ago, was fully aware from observation and clinical experience of the great importance of diseased teeth to the general health. He described toothache, as resulting from gout and rheumatism, as producing disorders of the stomach and noxious matters, which, according to the pathology of his time, was the mode of expressing what is meant by constitutional disorders.

It also must not be forgotten that the teeth are often made the fools for the other organs. They are just as liable to be the objects of sympathetic irritation, and in the absence of adequate knowledge of the cause of pain, have been condemned for the faults of their fellow-organs.

Toothache has resulted from constipation of the bowels. Gout is frequently ushered in with the most terrific dental suffering.

Dr. Cartwright speaks of a gentleman suffering from hemorrhoids, who always had an acute pain in his upper molar teeth but which invariably ceased when a hemorrhage relieved the engorged vessels.

The foregoing cases are but a few of the great number that might be collected, showing the importance of the teeth, in healthy and unhealthy conditions, to the welfare of the whole system.

## DIET IN DISEASE.

By H. ARNOTT, M.D., London, Canada.

From the *Canadian Practitioner*, August, 1885:—Our hopes of progress in prevention and cure of disease lie more in the direction of the investigation of its causes than the discovery of specifics. We have made vast strides in the study of diseases in which we can trace the causative agent to his lair, catch him, and feed him, and breed him, and study his habits, and discover his vulnerable points, whilst in various affections having their cause in the conditions of every-day life, we have advanced little since the days of Abernethy. Foremost among these conditions is the food we eat.

The purpose of this paper is merely to show that several disorders of the system have their origin in the consumption of more nitrogenized food than the constitution or circumstances of the person require, and consequently that the regulation of the amount of albuminoid food consumed frequently constitutes a valuable and definite therapeutic resort.

Our food may be said to consist chiefly of albumen, starch, fat, and sugar, and it would seem evident that the first principles of dietetics should be the knowledge when to increase or decrease any of these elements. If we inquire what becomes of any excess of food taken into the system beyond its requirements, we find that if an excess of fatty or starchy food be taken, it may be deposited as fat. If too much saccharine matter be indulged in, it may be deposited as fat, or carried off as a temporary glycosuria; but an excess of albumen has no such outlet. It demands a plentiful supply of oxygen to fit it for elimination, and if, through sedentary habits, diseased lungs, or other cause, this be not forthcoming, the blood is flooded with offensive matters which all the emunctories of the body are not sufficient to remove.

My attention was forcibly called to this matter when studying certain forms of hemicrania. Some of these, I noticed, were completely cured by a diet from which albuminoid food was almost excluded, and instead of the patients running down and becoming weak, in several instances they gained in weight and strength. In one instance the patient gained fourteen pounds in a short time after the change of diet. Of course, vigorous out-door exercise might have answered the same purpose, but that is a prescription which has various obvious objections.

In spasmodic asthma and bronchitis, I think, there is no therapeutic measure that will finally give greater satisfaction than lessening the amount of albuminoid food consumed. These affections are sometimes curable, by this measure alone, even in cases where the hereditary tendency thereto is distinctly marked. I might cite several such cases.

Sleeplessness, when accompanied with a dark skin, tense arteries, and a deposit of lithates in the urine, is very much benefited by this measure. Of course, the opposite class of cases are met with, where an exhausted system calls for rest and generous nourishment, but properly selected cases will be found to yield very satisfactory results.

In Bright's disease, whether acute or chronic, the diet should not include albuminoid food. The reasons for this are so obvious that no further reference need be made to it.

Foul breath, not due to any local affection, will frequently be rapidly cured by this diet without the aid of medicine.

There is an absurd notion prevalent that a person will get weak under this regime; so far is this from being true, that I have had patients gain several pounds in weight. Get weak, indeed, on a diet that has produced so many splendid Scotchmen and Irishmen, and enables the Arab to travel from fifty to sixty miles a day, and undergo the greatest hardship!

Albuminoid food is a true stimulant, causing increased vigor and power of endurance, and the want of it must certainly be felt by the patient, but we must not take sensations for reality, nor the patient's feelings as our guide in prescription. Nor must we forget that, if more coal is put into the furnace than is completely burned, the grating will become choked with too much waste.

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### LAVAGE AND GAVAGE.

From the *Medical Age*:—Lavage is a term employed by Debove, of Paris, and thus more prominently brought before the profession within the past few years, to denote the method of gastric ablution, and gavage is the method of feeding with liquid preparations to which that author, Dujardin-Beaumetz, Lauder Brunton and Henry B. Millard have recently been devoting a considerable degree of attention. From the reports which these gentlemen have furnished we are constrained to believe that lavage and gavage are important and much-neglected therapeutic measures. Lavage is especially valuable in all cases of dilatation of the stomach, whether due to obstruction at the pylorus, to atony of the muscular layer, or to the paralysis consequent on chronic catarrhal conditions. The apparatus for its performance is quite simple, consisting merely of a large funnel, to which is attached about four feet of flexible rubber tubing. The tube is introduced into the stomach, the voluntary efforts at deglutition by the patient much facilitating the introduction, and the funnel is elevated at a sufficient height to permit of the fluids gravitating freely into the stomach. The funnel is then lowered, and thus by siphon action the fluid is drawn off without any effort on the part of the patient. For simple cleansing of the stomach tepid water may be employed, but when there is pain chloroform water (a saturated aqueous solution of chloroform and plain water, equal parts) may be employed. Anti-putrescent washes may also be thus employed, and their use in particular cases will readily suggest itself. A one-per-cent. solution of boracic acid, or a saturated solution of carbon bisulphide and plain water, equal parts, makes a valuable anti-putrescent wash.

As a means of artificial feeding, gavage has been rendered especially valuable by the recent improvements in the matter of meat powders. In organic disease of the stomach, accompanied, as most forms are, by anorexia and positive disgust for food, the introduction of a readily assimilable food directly into the stomach is a desideratum in the treatment.

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### POSTURAL METHOD OF TREATING DILATATION OF THE STOMACH.

In the *British Medical Journal*, Dr. PETER TYLER, of Manchester, England, relates a case of dilatation of the stomach effectually relieved by means of the recumbent position, the patient lying on the back for two hours after each meal, with a pillow under the buttocks. The diet was also restricted to fluids, milk and beef tea, and a tonic of iron and strychnia was given. The first application of the postural treatment induced vomiting, but the treatment being persisted in, this soon ceased; improvement set in immediately and progressed rapidly. After a little while the patient was persuaded to go out after applying a tight binder to the abdomen, continuing the postural treatment after eating. In the course of a few months she had

regained all her former strength, energy and spirits. The *rationale* of the procedure is obvious. Owing to the relaxed and flabby condition of the stomach the food comes to hang below the level of the pylorus in the flaccid sac, incapable of emptying itself in the ordinary postures of the body. By elevating the lower end of the abdomen, the contents of the stomach are brought on the level with the pylorus, and thus put in a position to pass on in the natural way.—*Md. Med. Jour.*

### INTESTINAL NEUROSES.

CHEREVSKY (*Rev. de méd.*) has collected several cases which he regards as examples of tonic spasm of the circular muscle-fibers of the intestines. This accident, which occurs more especially in persons of intellectual habits and sedentary modes of life, is characterized by suddenly appearing enormous tympanitic distension of the abdomen, with a considerable degree of pain and tenderness, a sense of epigastric oppression and of dyspnoea, violent gripping pains and constant desire to go to stool with inefficient expulsive efforts, and the passage of only a small amount of fæcal matter in the form of bullet-like scybala or of small compressed cylinders. These symptoms last a few hours, or even some days, and then suddenly disappear. In the intervals between the paroxysms the patients enjoy excellent health, their appetite is good, and their only complaint is of more or less persistent tympanites, with constipation and frequent eructations of odorless and tasteless gas. The paroxysms are induced by intellectual effort, mental excitement, violent emotions, etc. This, together with the suddenness of the appearance and disappearance of the symptoms and the character of the latter, leads the author to the belief that in this condition we have to do not with a state of intestinal atony, but with a state of localized intestinal spasm, producing sudden accumulations of gas with the associated phenomena of colic, tenesmus, and constipation. The results of treatment are corroborative of this view, as the constipation and tympanites yield readily to opium and belladonna, while cathartics, which should ameliorate the symptoms, if due to atony, only aggravate them.—*N. Y. Med. Jour., Aug., 1885.*

### RECTAL MEDICATION.

From the *Canadian Practitioner*:—Dr. D. W. CATHELL, in a paper read before the *Medical and Chirurgical Faculty of Maryland*, says he does not use medication per rectum in preference to the usual method by the mouth, but a number of cases arise where the stomach should be left at rest to perform its proper digestive functions, and yet where drugs are needed by the system. His favorite method of administering belladonna and opium is to give them combined. The combination seems to unite all the good qualities of the two drugs and to lessen the unpleasant effects of each. He referred to a number of cases, such as "ulceration of the prostate gland," where after long agony the relief under this method began to be observed at once; vesical tenesmus; senile hypertrophy of the prostate gland, when the patient from being obliged to rise every hour during the night for micturition was enabled to sleep all night without disturbance; encysted renal calculus; vaginismus; subacute sciatica; dysentery and irritable rectum, etc. In order for the suppositories to have effect, they must be prepared carefully and accurately. The excipient preferred by himself is glycerine jelly. But where the suppositories are to be kept for a considerable time he used oleum theobromæ. This last keeps fresh for a very long time and does not grease. It is often adulterated with wax, which renders the medicines contained in the suppository inefficacious. The fact, however, that the suppository is

found in the dejections undissolved, provided it has been made of cocoa butter, does not mean that it has not yielded up its contained medicine, as, since it is a vegetable fat, it is able to do this without being dissolved. The size of the suppositories he uses is fifteen grains. The question arises whether medicine administered per rectum in capsules would not be better. He is rather inclined to favor them, as there are manifest advantages in favor of the capsule, such as cheapness, accuracy, and the exclusion of air from the drug. He generally gives the medicine once in six hours. He prefers morphia to opium and the watery extract of belladonna to the alcoholic, the usual dose being one-fourth to one-sixth of a grain of morphia and one-half of a grain of belladonna.

## DISEASES OF THE URINARY ORGANS.

### PRIMARY MALIGNANT DISEASE OF THE KIDNEYS.

By GEORGE MINGES, M.D., of Dubuque, Iowa.

From the *Jour. Amer. Med. Ass'n*:—Malignant disease of the kidney is one of the rarer affections with which the physician has to deal, and was little known prior to 1880.

*Frequency*.—Of malignant disease in general, that of the kidney forms but a small proportion. Out of 8,300 cancers Fanchon found only three affecting the kidney; on the other hand, d'Espine found two cases in 889, or 0.3 per cent., seated in that organ, and Virchow has arrived at similar conclusions, finding that 0.5 per cent. of all fatal malignant tumors in Wurzburg were of the kidney. In Frerichs' clinic only three cases occurred in ten years.

*Age*.—Of all cancers, and certainly of those of the abdominal and thoracic organs, that of the kidney occurs most frequently at an early age. In Ebstein's collection of 52 cases, 10 per cent. occurred before the age of one year, and almost 40 per cent. during the decennium. By adding together Ebstein's cases, those of my table (56) which were reported after 1876, and those cases in Homan's table not included in my own, I find 111 malignant tumors of the kidney with between 40 and 50 per cent. of all cases occur during the first decennium, and that the sixth decennium comes next in point of frequency.

*Pathology*.—*Side affected*.—Almost all authors state that the right kidney is affected much more frequently than the left.

*Size*.—The affected kidney is almost always enlarged, and generally greatly although Roberts mentions one case in which it was smaller than normal. According to Ebstein, the largest tumors, not only relatively but absolutely, occur in children, sometimes acquiring an enormous size.

*Varieties*.—Of 63 cases in which the nature of the tumor is mentioned, I find 30 sarcomata, 30 carcinomata, 1 fibro-cystic tumor, 1 adenoma, and one solid tumor. This shows that cancer and sarcoma occur with about equal frequency, although Ebstein seems to doubt whether primary sarcoma of the kidney ever occurs. Jacobi claims to have seen fourteen or fifteen cases of sarcoma of the kidney, some of them congenital, but I have not been able to determine how many of them were primary.

*Point of Origin*.—According to Roberts, cancer of the kidney always begins in the cortex. Formerly its origin was supposed to be in the connective tissue, but Perceverseff has demonstrated its development from the epithelium of the uriniferous tubules, corroborating Waldeyer's theory. In his case could be seen tubules normal in one part of their course, and in another showing proliferation of their natural lining epithelium.

*Secondary deposits*, according to Ebstein, occur in more than one-half the cases. In my 60 cases, their presence is mentioned in only 20, but this does not prove that they were absent in all the others. The supra-renal capsule is rarely affected secondarily, and the same is true of the heart.

*Symptomatology.*—Cancer of the kidney may exist for some time without causing any very important symptoms.

Roberts says: "*The distinctive symptoms of cancer of the kidney are tumor in the abdomen and hæmaturia.* In every case in which it was the determining cause of death, either one or both were present." To this rule there are few exceptions, but in a case described by Hirtz, the only symptoms were uncontrollable diarrhœa, marasmus, and œdema of the legs.

*Tumor.*—By far the most constant, and generally the first symptom, is tumor. All authors, so far as I am aware, agree on this. The tumor is generally first noticed in the flank between the border of the ribs and the ilium, pushing the intestines before it. Dullness on percussion is not obtained until the tumor has become large to reach the parietes.

The relation of the intestines to the tumor is of great importance in making the diagnosis, as it forms the criterion in diagnosing retro-peritoneal tumors. If the neoplasm be situated in the right kidney, the cœcum generally lies to its outer side, the ascending colon crosses in front of the tumor obliquely from right to left, and the small intestine lies to the inner side. When the left kidney is affected, the descending colon and a portion of small intestine lie in front. Roberts goes so far as to say that the colon invariably lies in front, but to this also there are some exceptions. The fixed position of the tumor is generally dwelt upon as a very important characteristic, but the exceptions are quite numerous. As a general rule, it may also be stated that the tumor does not descend with the diaphragm during inspiration. An important symptom mentioned by Bright, to show the connection of the tumor with the kidney, is omitted by many authors; i.e., the motion communicated to one hand lying on the tumor, when the other hand tilts the kidney forward by deep pressure in the loin.

*Hæmaturia.*—The next symptom in point of importance and frequency is hæmaturia. We find that in 106 cases it was present 48 times, or about 45 per cent. According to Seibert, it is the first symptom in two-thirds of the cases occurring in children.

*The urine,* as a rule, shows but little alteration from the normal. During the attacks of hæmaturia it of course contains albumen and fibrin and shows blood-discs under the microscope. Of 86 cases where the character of the urine is mentioned, it seems to have been normal between the attacks of hæmaturia in 20.

*Pain* is a very inconstant symptom in malignant disease of the kidney. In 38 cases I find it absent 8 times. In 8 cases it was remarked to be the first symptom.

The most frequent seat of the pain is in the loin, whence it may radiate to the ribs, shoulders, groin, or down the thigh, simulating sciatica, or to the bladder, imitating renal colic. The most frequent seat of pain is the abdomen.

*Gastric Symptoms.*—*A priori*, we should expect constipation, from compression of the colon, to be a very common symptom, and it is mentioned by most authors as of very frequent occurrence. In my collection appetite is said to be fair in 5 cases; variable in 3; voracious in 3.

*General Symptoms.*—Emaciation usually progresses very rapidly in children. In adults, years may elapse before the constitution becomes affected to any appreciable extent. According to St. Germain, the cancerous cachexia is not observed in children. A waxy appearance from loss of blood may occur, and in the children I have observed a look of premature senility was very well marked.

Jacobi claims that late impairment of the general constitution and temporary improvement render it probable that the tumor is a sarcoma, rather than a carcinoma, and in several of his cases of sarcoma the constitution was impaired late or not at all.

*Diagnosis.*—Hæmaturia is a valuable positive sign, but too much importance should not be attached to its absence. In children the diagnosis is comparatively easy; for a large tumor was detected in all the cases I have found recorded, and hæmaturia is present in two-thirds of the cases, according to Seibert. Its seat in the kidney determined, the tumor can only be caused by cystic

degeneration, hydronephrosis, or malignant disease. As the former two are probably always congenital, the diagnosis of malignant disease in children with a non-congenital renal tumor can be made with almost absolute certainty (Ebstein). When lumbar pain alone is present, without the distinctive symptoms of tumor and hæmaturia, it is impossible to make even a diagnosis of probability, unless the pain is severe and constant and associated with cancer in other organs. Small malignant tumors may run an entirely latent course.

### ENURESIS IN MEN.

By J. HENRY C. SIMES, M.D., Prof. of Genito-Urinary Diseases in the Philadelphia Polyclinic.

From the *Polyclinic*.—What is understood by frequent urination? It is only when one is in some manner inconvenienced by the frequency of the act or desire to urinate, that I would consider him as suffering from frequent urination.

The conditions or pathological changes occasioning the affection are: *nervous habit, reflex action, functional and organic diseases of the genito urinary organs, diseases of the nerve centres, urinary calculi* and, finally, *abnormal conditions of the urine*. From a careful examination of any case of frequent urination, this symptom will be found to depend upon one or more of the above causes, and it is only by directing our treatment to the origin of the trouble that any hope of success is to be looked for.

Frequent urination which depends upon a nervous condition, is not an unfrequent complaint.

The cases of frequent urination which may be said to be due to a habit of always urinating whenever the mind has its attention drawn to the function of micturition, are not of unusual occurrence, and more apt to be met with in those who are classed as nervous; indeed, the habit is generally formed at first from some nervous anxiety affecting the patient.

The cases of frequent urination in which reflex action may be considered as a cause are, as would naturally be expected, unfrequent in adults; but in young children, where the nervous system is very susceptible to impressions, the symptom of frequent urination is relatively a quite common affection. In the adult, lesions of the anus and rectum not seldom occasion enuresis.

Cases of atonic impotency, in which there exists considerable hyperæsthesia of the prostatic portion of the urethra, I have found, with scarcely an exception, to complain of frequent urination.

That structural or organic diseases of the genito-urinary organs are, during some period of their course, accompanied with the symptom of frequent urination, is a well established fact.

Altered and abnormal conditions of the urine which may occasion frequent urination, are not unfrequently met with, and where there is any difficulty in diagnosis an examination of the urine will often determine the question. A urine which is non-irritating to the urinary passages, may be described as a pale lemon colored fluid, sp. gr. 1.020 and slightly acid. The low specific gravity of the urine which is found in some cases of disease of the kidneys, but more often in hysteria, no doubt causes the irritability of the bladder from which such patients suffer. Water is more irritating to those passages of the body over which it is not intended to pass, than a saline solution of some density. This is well seen in the employment of the nasal douche; if pure water is used the patient will complain of severe frontal pain, but by the addition of some salt, to increase the specific gravity, the pain ceases. Acid urine, when due to a great excess of uric acid, and met with more especially in gouty subjects, very often causes a distressing condition, on account of the frequent desire to pass water. The presence of sugar in the urine is accompanied with the symptom frequent urination, and most generally is the first and only symptom of the disease diabetes mellitus.

## THE TREATMENT OF ALBUMINURIA.

From the *Canada Med. and Surg. Jour.*, August, 1885.—The treatment of albuminuria *per se* is seldom attempted by physicians. How different is the case with other prominent symptoms, as dropsy, anæmia, or jaundice. Here it is the rule to treat the symptom and not the cause of it, while in albuminuria the contrary is the practice—we treat the cause and not the effect. The principal reason for these differences in practice is the fact that the former are marked subjective conditions which arrest the attention of the patient and his friends, while the latter being entirely objective, we are not urged to interfere. In jaundice, dropsy and anæmia, we are very frequently unable to discover the cause. In albuminuria, on the other hand, the diagnosis of the seat and nature of the cause is not difficult to make out.

In albuminuria depending on retardation of the venous return from the kidneys, the removal of the obstruction to the circulation is quickly followed by the disappearance of the albuminuria. As the most common cause of this form of loss of albumin is cardiac failure, digitalis is therefore our best agent to employ for its removal.

Pyrexial albuminuria requires no treatment, as it disappears after the temperature has become normal. The albuminuria of anæmia, and that form due to neurotic disorders, also quickly disappears on the removal of the cause.

In the albuminuria due to disease of the kidney, this symptom becomes only of marked importance when it is the only one present for a long period indicating the nature of the lesion with which we have to do.

Some physicians look upon the actual loss of albumin as serious when long continued in cases of chronic nephritis. They consider it a great drain on the system. Senator has lately pointed out that this loss, at the most, cannot exceed half an ounce in the twenty-four hours. He shows that in cases of chronic catarrh of the bladder more than this quantity of albumin is daily lost for many months, and yet nobody thinks the loss a dangerous one or takes any means to directly diminish it.

There is great significance in the experience obtained by Bruce and Sparks in the treatment of a phthisical patient who was also suffering from chronic albuminuria. They fed him largely on eggs, without any marked change in the quantity of albumin excreted; but shortly after confining him to strictly vegetable diets, the albumin entirely disappeared from the urine.

Penzoldt has found that on feeding a dog who had chronic albuminuria with a meat diet, there was marked increase in the amount of albumin when compared with that eliminated when the animal was under a bread diet.

It follows from the above observations that when we are treating albuminuria as a symptom, we should diminish, as much as possible, diet rich in albuminous materials. Milk diet, carbo-hydrates, fatty and gelatinous substances should be chiefly relied on. Next in importance to diet in the treatment of albuminuria is the subject of muscular rest. It is a well-established fact that violent exercise is sufficient to bring on albuminuria. It is a clinical fact also that patients with chronic albuminuria excrete more albumin after active exercise than they do while at rest. The avoidance of cold baths and mental inquietude are also important points to be taken into consideration.

To sum up the treatment of albuminuria, there are four important points to attend to: 1st, A diminution in the amount of albumen ingested. 2nd, Rest in bed. 3rd, The avoidance of cold and cold baths. 4th, Mental rest.



# SURGERY.

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## OPERATIONS, APPLIANCES, DRESSINGS, ETC.

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### SOME OF THE SURGICAL SEQUELÆ OF THE EXANTHEMS AND CONTINUED FEVERS.

By ROSWELL PARK, M.D., Prof. of Surg. in the Med. Dept., Univ. of Buffalo, N. Y.

[ From the *Canadian Practitioner*:—Some of the properly surgical sequelæ of the exanthematous and continued fevers are well known and commonly recognized; such are orchitis following mumps, catarrh of the middle ear after scarlatina, and bed-sores after typhus and typhoid. These are easily discovered, and their causes readily and unmistakably traced. But there exist numerous other lesions whose actual primary causes are connected with the febrile state, but are yet frequently overlooked or ignored, and which may even pass totally unrecognized because of forgetfulness or ignorance that they may ever be thus produced. Concerning these the text-books are singularly silent; and it is to a few of the more striking of these, as illustrated by cases occurring in my own practice, that I invite attention.

Most of those which I shall report have been sequelæ of typhoid fever, and my reason for this is well expressed in a sentence from one of Paget's *Clinical Essays*. "The sequelæ of scarlet fever are commonly enumerated; those of typhoid fever—especially those seen in surgical practice—are scarcely less numerous, but seem less known."

Post febrile collections of pus in the joints are rare. Of 3,130 consecutive cases in Vienna General Hospital only two occurred.

Dr. Park then gives the clinical histories of the following cases: Morbilli; monarticular abscess. Post-typhoid intra-muscular abscess. Continued fever; abscess of ischio-rectal fossa, rectal fistula. Typhoid, convalescence; parotid abscess, recovery. Scarlatina, paralysis of the serratus and rhomboids. Scarlatina orchitis. Typhoid, epididymitis. Typhoid, abscess in prostate. Typhoid, acute periostitis of bones of pelvis and of both lower extremities; recovery. Morbilli, abscesses, spondylitis deformans, and later necrosis of the lower jaw. Typhoid, acute Potts' disease. Typhoid, caries of the sternum. Typhoid, extensive osteo-myelitis and caries of bones of right arm; exarticulation at shoulder; recovery. Typhoid, cold abscess; osteo-myelitis of femur, extensive necrosis; amputation; recovery.

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### THE VIRULENCY OF THE HUMAN BITE.

From the *Western Med. Reporter*, Dr. G. FRANK LYSTON, refers to several cases and says:—We think that we are justified in saying that there is an element of disaster in injuries inflicted by the human teeth, which the nature of the lesion does not in itself explain. Were it not so, there would

be no valid reason for the non-occurrence of such serious results after the majority of lacerated wounds. It will be noticed, that in the absence of specific poison, the gravity of a lacerated or contused wound in a perfectly healthy person, is in direct proportion to the severity of the injury. This, however, cannot be said of the human bite. Popular notions are sometimes clinical facts, and it is a common observance among the laity, that the bite of a man is worse than that of a dog, if the animal be not rabid. It will be observed that we take a view of the matter quite contrary to that expressed by the *Lancet* recently.

In commenting on a case of alleged death from the bite of an epileptic, the *Lancet* says: "There is no poison in the bite of a person in a fit, as there is in the bite of a rabid dog. It is, of course, desirable that every care should be taken to avoid the bite of an epileptic, as it is also that of any other excited or enraged creature; but there is not the slightest ground for supposing that worse consequences will follow an injury of this class than one of any other description, if it be equally severe and is attended on the part of the victim by a morbid state of the constitution."

We will qualify our position by stating that we are not prepared to say that a specific virus is present in such instances, but that there is a special irritant and toxic property in the inoculated secretion, we do claim, and certainly such an assumption is borne out by the results of this class of injuries.

#### CONGENITAL DISPLACEMENT OF THE HIP.

From the *Boston Medical and Surgical Journal*:—In our last issue we published the detailed account of the successful reduction of a double congenital luxation of the hip by Dr. Buckminster Brown, of Boston.

Notoriously unamenable to treatment as this condition has been considered, we will hastily review the usual means for dealing with this deformity. The subject naturally divides itself into the operative and mechanical methods of treatment.

E. Rose, in 1874, ventured to resect the head of the femur in a unilateral congenital dislocation. C. Regher soon followed with two resections for single congenital dislocations. Margary reports seven excisions of the head of the femur for this deformity. All under antiseptic precautions. Extensions was immediately applied and continued throughout the treatment. Two cases were decidedly benefited; the results in the others were not recorded.

The great obstacle to all attempts at a reduction of this deformity is the obliteration of the true acetabulum. To obviate this difficulty Heusner, not only excised the hip-joint but deepened the acetabulum by chiseling; and Margary, in another case, after opening the hip-joint chiseled out the acetabulum. The deformity in these cases was reduced and the capsular ligament was reinforced by a strip of periosteum removed from the posterior superior margin of the acetabulum. Heusner's case was relieved of pain and could walk at the end of three months. Margary's case died of septicæmia.

Finally, as representing another operative method, we have Broadhurst's free division of all opposing muscles about the hip-joint.

The mechanical treatment of this deformity has been attempted by the various extension-splints. Certainly Dr. Brown's case is valuable and very striking as an exponent of what can be accomplished by properly adapted mechanical contrivances and the careful, minute supervision of a competent orthopedist. We feel that he strikes the keynote of the mechanical treatment of the deformity when he says: "The apparatus used was designed as the objects to be accomplished and the exigencies of the treatment presented themselves." The recognition of this principle of mechanical treatment has, in a large measure, given him success.

Our drift, at present, is toward brilliant operative methods. Dr. Brown has demonstrated that certain cases can be safely and successfully treated by mechanical procedures alone.

A CASE OF FRACTURE OF THE BASE OF THE SKULL, WITH  
LOSS OF BRAIN SUBSTANCE THROUGH EAR; RECOVERY.

By W. H. WILDER, M.D., of Cincinnati, O.

From the *Medical News*.—On the morning of November 30, 1883, a well-developed man, about thirty-eight years of age, was brought into the Cincinnati Hospital in a semi unconscious condition, unable to remember the cause of his injury or to give any account of himself. It was only by persistent inquiry that his name could be obtained, and after giving this he would immediately relapse into a drowsy stupor, from which he was not easily aroused. There was a slow but continuous flow of blood from the left ear. Lodged in the concha and in the external auditory canal, a small mass of white tissue, apparently nervous in character, was found; and on the pillow lay another small quantity, similar in character, which had escaped from the ear. These specimens, aggregating about one drachm in weight, when subjected to a microscopic examination, revealed the presence of nerve fibres, myeline drops, and what appeared to be roots of nerve cells; pus cells were abundant in the field. The respirations were full, numbering 20 per minute; temperature  $99\frac{1}{4}^{\circ}$  F., pulse 80. The pupils were active and responded normally to the stimulus of light. No perceptible paralysis of the face or extremities existed.

In the evening of the same day, the condition of the patient was unchanged. The character of the discharge from the ear had changed from that of blood to a clear serous fluid with a slightly sanguineous tinge, which escaped persistently and continuously. Pulse 80, temperature  $99\frac{1}{4}^{\circ}$  F. Breathing quiet and natural; urine had been passed in bed; bowels had not been evacuated.

Here follows the clinical history of the case up to Dec. 12th, when the patient was discharged at urgent request of friends, and passed from my notice, although subsequently very correct information was received from his wife concerning his mental and physical condition. The time which he spent at the hospital is a blank to him, but his memory is now so much improved that he remembers some important incidents connected with his injury. He declares he was struck on the head by some one whom he did not see, and thinks he was dragged to a railroad track by the same person. His intellectual faculties have all improved, but at times his speech is rambling, and he is inclined to talk incessantly of past events. For two or three months after leaving the hospital, he experienced severe vertigo, especially when performing suddenly any lateral movement. Ptosis of the left eye was noticed about two months after his discharge, and occasionally he has some pain in the left side of the face. No paralysis of the face is present now.

This case affords several interesting points for consideration, chief among which is the escape of brain substance from the ear. There was no doubt as to the nature of the injury after the examination of this substance; but even before this, the copious hemorrhage from the ear dispelled the thought that the blood might proceed from a ruptured membrana tympani.

The hemorrhage from the ear must be profuse, and continuous for a considerable length of time to afford certain evidence of the existence of fracture involving the petrous portion of the temporal bone. On the other hand, the absence of this sign, hemorrhage from the ear, does not necessarily indicate absence of a fracture implicating the petrous portion of the temporal, and even opening up the cavity of the tympanum; for it is well known that in such cases blood may pass into the mouth through the Eustachian tube when the injury has not caused a rupture of the membrana tympani.

The cases of fracture of the petrous portion of the temporal bone with the escape of cerebro-spinal fluid and brain substance are rare, and of four cases that were found on record only one terminated successfully.

The continuous discharge of a clear, watery fluid (the cerebro-spinal fluid) from the ear was formerly regarded as the most unfavorable sign that could accompany injuries of the base of the skull. Several cases, however, of recovery, after such an accident, have been recorded.

The fact that facial paralysis of the left side did not occur until two days after the accident, furnishes conclusive evidence that the integrity of the nerve was not destroyed by the force that produced the fracture; and it also proves that the temporary impairment of function was due to the subsequent pressure upon the nerve, somewhere in its course through the *acqueductus Fallopii*, either by an effusion or blood clot within the tympanum.

That the pressure was not upon the nerve before entering the internal auditory meatus is evidenced by the fact that the hearing of that side was unimpaired.

### A RESUMÉ OF THE TOBACCO QUESTION.

From the *Med. and Surg. Reporter*:—It has been charged that it is useless and an unnecessary expense to the consumer, that it is filthy, degrading, and injurious. These, however, are terms of the argument, and facts must be shown to prove them to be always justifiable. As to whether the use of tobacco is filthy, degrading, or demoralizing, depends upon the manner of its employment.

The statement that tobacco is injurious, is an obvious one, and might be made of any substance in nature in this unqualified way, being in one sense true, in another wrong. It would be as difficult to show that tobacco is never in any quantity harmful, as to prove that in moderation as a rule it is ever so. Certainly the only middle-ground, and the only question or issue in the matter, is whether moderation in its strictest sense tends to injure or destroy either mind or body.

Chewing, no doubt, in many persons, on account of the frequent spitting, may weaken the system, though as a rule its use in this mode, if not carried to excess, is not incompatible with good digestion and the highest state of health, as we frequently find in inveterate chewers. Smoking is the pleasantest, cleanest, and likely the proper way to use tobacco. One form, however, the cigarette, is exceedingly objectionable. These cigarettes, composed often of the vilest material, are enclosed in paper, the smoker inhaling the fumes of the burning paper and tobacco. The cigarette is also dangerous from the fact that the smoker can fill up interstitial moments in which a cigar would not be lighted, thus leading to the greatest excess.

The pipe is in many respects preferable to the cigar. Many smoke vile cigars or a bad pipe, and really never learn the comfort and luxury of a mild, clean smoke. It is these persons who sometimes betray evidences of nicotine poisoning, and who furnish the material for the argument that tobacco is an evil. To them, unquestionably, it is, for they are ignorant of its proper use.

It has been charged against tobacco that it produces decay of the teeth. This popular idea, however, does not agree with authorities on the subject, who attribute, on the other hand, remarkable preservative powers to tobacco.

The best authorities seem to regard the disorder known as tobacco amaurosis as purely functional, transient, and very amenable to treatment.

As the use of tobacco may be associated with almost any known malady, it is not surprising that it has been assigned as the cause in so many and various disorders. Coincidences are often mistaken for causes, and no doubt phenomena attributed to tobacco have been confounded with those of co-operative causes. "If it is explained on the ground of excessive smoking that students are near-sighted, it is difficult to account for the fact that sailors smoke more and are far-sighted, the result in each instance being due to the manner in which the eyes are used."

It is held by some that tobacco excess may produce forms of insanity, but it is very difficult to determine from statistics that this is true.

It has been alleged that cancerous ulceration of the lip and tongue have been produced by smoking. This idea, however, is discountenanced by the leading authorities.

"The causes of cancer of the lip are unknown. \* \* \* \* Writers and teachers \* \* \* \* have referred its origin to the habit of smoking a short clay pipe. \* \*

"Such an opinion would be entitled to respect if it were not for the fact that subjects of cancer of the lip often do not use tobacco in any form whatever." (Gross' Surgery, vol. ii., p. 539.)

It is interesting to notice the remarkable statements that have been set forth from time to time by zealous opponents of tobacco. In a treatise on tobacco, published in England many years ago, Dr. Budget stated that "in America it was no uncommon circumstance to hear of inquests on the bodies of smokers, especially youths, the ordinary verdict being, 'died of extreme tobacco smoking.' Such a finding by a coroner's jury at present would certainly be regarded as unique. It has even been asserted that a syphilitic subject might communicate the disease to other persons by the smoke of his cigar. It is obvious that infection in this way is utterly impossible. All of the following conditions and maladies, with innumerable others, have been attributed to the use of tobacco: goitre, scirrhus of pancreas, and pylorus, cancer of lip and tongue, atrophy of salivary glands, dyspepsia, cardialgia, organic disease of heart, defective nutrition, anæmia, *depravity of the secretions*, acne, *gum boils*, ulceration of larynx, predisposition to phthisis, *anorexia*, diarrhoea, languor, headache, alcohol habit, *perforation in typhoid fever*, jaundice, swelling of feet, hoarseness, disturbed sleep, sense of suffocation, night-mare, irritable temper, enervation, hysteria, indecision, vertigo, melancholy, loss of memory, apoplexy, delirium tremens, paralysis, mania, softening of the brain, *early senility*, imbecility, epilepsy, *cowardice*, deafness, amaurosis, spermatorrhœa, and emasculation."

The fact, however, has been pointed out that men are on the whole, as healthy as women, while nine out of ten of the male population of the world use tobacco, and women as a rule abstain. In the learned professions, about one-half of the ministers are addicted to it in some form, likely three-fourths of all physicians, and nine-tenths of members of the legal fraternity.

In looking calmly at the tobacco question, there is one feature calculated to excite alarm, and that is the habit of chewing and smoking so widely practiced among boys. This, to young growing boys, is unqualifiedly hurtful. They smoke and chew generally the worst tobacco, and to a degree which would positively be harmful with the majority of adults.

Smoking, when done at proper times, facilitates digestion. The sense of relief obtained by a cigar, after a heavy meal, is well-known to smokers. Dyspepsia sometimes follows the discontinuance of tobacco, and is removed when the habit is resumed. While the abuse of tobacco weakens the system and leads to emaciation, used intelligently it exerts a favorable influence upon nutrition.

"Soldiers of all nations use it. It was a standing injunction of Napoleon that his troops should have tobacco, and it was of great advantage in the retreat from Moscow." (Fiske.)

While it is neither liked nor needed by animals, who loathe it, it seems to be required and craved by man, to whom its characteristic properties appear peculiarly grateful and often useful. It has repeatedly and unjustly been called a curse, but those who have written most of its baneful effects, as a rule have never used it. Indeed, this comforting substance is so far removed from the idea of a curse, that it should not be forgotten when we recount the many blessings of mankind.

### A PLEA FOR THE EARLY ABANDONMENT OF DRESSINGS IN THE TREATMENT OF FRACTURES OF THE EXTREMITIES AND THEIR JOINTS.

By EDWARD VON DONHOFF, M.D.

From the *Louisville Med. News*.—As one looks over the field it would seem as if the very common occurrence of fractures had, contrary to what might fairly be expected, contributed but little, as evidenced by generally indorsed rules of practice, to a proper relationship of advancing, practicable knowledge and methods of treatment. It is true that surgeons no longer "bleed"

to facilitate reduction of a dislocation, or give sixty-grain doses of calomel, and other vaunted antiphlogistic medication, as a part of the approved treatment of fractures, but it is true also that limbs are confined in apparatus until the joints above and below the seat of fracture are stiffened and useless, and until the muscles are atrophied. It is also true that it is almost if not quite the expected thing that a joint, after fracture involving it, should become ankylosed, or at best be permanently and seriously modified in its usefulness.

It is but fair to "surgery" and surgeons to add that much of this character of lamentable error is found outside their proper rank, but enough—a great deal—issues from hospitals and high places among general practitioners and surgeons to set the investigator agog. The deepest sense of active pity for the sufferers is the proper fruit of scientific inquiry into the causes; and this leads, in this instance, to a proper selection of means to the end desired. A more general application of these must avoid many lifetimes of travail for humanity and chagrin to practitioners.

The healing of a fractured human bone is, under ordinary circumstances, practically completed in five weeks; and perfectly so in as many months. But the fixation of the fragments is accomplished much earlier—ten to fourteen days—and this fact is quite sufficient to constitute a safe stepping-stone for the departure from former methods of treatment, which will be here advocated, based, as it is, upon a gratifying experience. Ten or fourteen days suffice for the perfect establishment of a firm ensheathing callous; in other words, for the formation of a secure protection for the furtherance of subsequent natural processes of repair. It follows then that *mechanical* appliances are no longer essential, except as guards against violence, and, as will be shown, are positively harmful to the later management of the case, if unduly brought into requisition. In young adults the first four or six days are devoted by nature to the readjustment (after fracture) of injuries to the soft parts. The periosteum is no longer distinctly traceable in the immediate vicinage of the "break," but has melted into the pulsatous mass by which it is surrounded. No effort at "fixation" is yet apparent. During this first reparative stage fixation (quiet) is necessary to prevent pain, caused by continued wounding of soft parts by bony points, and a tendency to displacements by muscular contraction.

The second stage of repair is itself mechanically protective against further injury. It consists in the condensation (hardening) of the mass before described, and the formation of a distinct ensheathing capsule, which envelops it—fusiform in shape—and is continuous with the true periosteum contiguous to the newly formed membrane (?). At the end of, variably, the eighth, ninth, tenth, or, at farthest, fourteenth day, this natural fusiform splint is sufficiently strong to permit quite brusque handling of the limb under observation.

An irresistible desire led me to examine conclusively for my purpose all cases of fracture, especially of the long bones, which have come under my treatment during the past ten years, with a view to determining the exemption last stated above, and it has in turn induced me to base my treatment during the past six years upon the data thus derived. My success has been so uniformly gratifying to my patients and myself that I can not but feel congratulated upon the temerity exercised in the previous studies. My list of cases embraces subjects as young as four months and as old as eighty years, the intermediate ages being fairly represented also.

*Treatment.*—My treatment with fixed apparatus differs only from others in that I most prefer for the first dressing, if accessible, strips of proper width—not to exceed four inches, even for the thigh—made of sole-leather and dipped in hot water. In addition *absorbent cotton* and the necessary rollers.

This dressing is made to include, for the purpose of "resting" rather than "fixing," neighboring joints in fractures of the extremities. The position of the limb as a whole is adapted to the complete relaxation of its muscles, and the bandage is put on snugly but not tightly. At the time of the first dressing a perfect adjustment of the fragments is attempted and secured if at all possible. The dressing is then permitted to remain undisturbed, unless.

unlooked for symptoms arise, until the sixth day. Now this is replaced by a single sheet of suitably-measured and cut leather, into which the limb is, after the most careful examination, placed and confined during the ensuing six or eight days, at the end of which the caseament is kept removed during the daytime, and adjusted again at night to prevent possible accidents during the involuntary motions of the sleeper. After the eleventh day passive motion of all the joints of the extremity is practised daily and the patient is desired to make voluntary efforts. [*Particular stress is laid upon this direction, as regards surgeon and patient, in cases of fracture of any of the joints of the extremities.*] After an average period of thirty days from the date of injury, the patients are dismissed with useful and perfectly physiologically mobile limbs. Nor does there seem to be any diminution in size denoting muscular atrophy. [There are special emergencies of a diathetic and traumatic (compound fractures) character in which the good sense of the surgeon must suggest modifications of the above-described conductment of cases in general.]

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### THE PRACTICAL TREATMENT OF FRACTURE OF THE LOWER END OF THE RADIUS, COMMONLY CALLED COLLES'S FRACTURE.

By JOHN B. ROBERTS, M.D., Prof. of Anatomy and Surg. in the Philadelphia Polyclinic.

From the *Polyclinic*.—The essential point in the treatment of this fracture is early and complete replacement of the lower fragment. The protracted convalescence and frequent stiffness of the wrist and fingers, seen often in this injury, are, I am convinced, due to imperfect reduction of the fracture and the confinement of the fingers during the use of the fracture dressing. When there is neither comminution nor loss of tissue by crushing, the fracture can usually be cured in four to five weeks, with little or no difficulty, and without stiffness of the fingers. When comminution and crushing exist, cure without impairment of motion, though probably with more or less persistent deformity, is nearly always possible; and in the same time. When I say "cured," I do not mean that every vestige of swelling and of osseous thickening disappears so soon, but the limb is capable of performing its ordinary functions.

No apparatus should be applied that restricts, at any period of the treatment, full and free motion of the fingers. In uncomplicated cases the splint need not be worn more than about ten days; provided that the patient is sufficiently intelligent to avoid submitting the arm to unexpected strains and blows. Passive motion is probably never necessary if the fracture is properly reduced, and the play of the fingers not restricted during the use of the splint.

Reduction is always painful, but is usually so quickly accomplished that I seldom use an anæsthetic. The surgeon must apply force directly to the fragments. Let him put the patient's hand in the prone position, grasp the middle of the forearm with one hand, and take hold of the patients' palm with the other hand in such a manner that his thumb can make strong pressure upon the apex of the dorsal prominence. By making traction on the hand of the patient, and then suddenly flexing the patient's wrist, while at the same time he presses with his thumb strongly upon the projection at the back of the wrist, he can nearly always force the lower fragment into its proper position without difficulty. A repetition of this manœuvre is sometimes requisite before accurate replacement is obtained. Still further manipulation may occasionally be necessary to reconstruct the normal outline of the radius, which has at the wrist, it will be remembered, a concave palmar surface.

If great comminution or crushing has been incidental to the fracture, perfect restoration of shape may be impossible, although the deformity can be greatly diminished. After reduction has been accomplished, any form of dressing is allowable, provided it immobilizes the limb, does not tend to

obliterate the normal curve of the palmar surface of the radius, and permits the patient to move his fingers. It was formerly thought that splints deflecting the hand to the ulnar side exerted traction on the radial side of the wrist, and were therefore indicated. This is incorrect teaching.

The hand should be placed in the prone or semiprone position, and a single splint extending from the elbow joint to the middle of the metacarpus, applied either to the dorsal or palmar aspect of the forearm. It is essential that the palmar splint, if it be chosen, should be convex on its upper surface at its carpal extremity, so as to preserve the integrity of the radial concavity, and not to make the palmar surface of the radius flat by forcing upward the lower fragment, which has just been pushed down into proper position by the surgeon's manipulations. This convexity of the splint may be obtained by using the moulded splint of Levis, which I employ, or a splint with a hard convex pad, such as that of Carr. It should be seen that the pad properly fits. The surgeon can readily make a pad out of soft wood and fasten it with screws to a straight splint. No dorsal splint is needed with either the Levis or Carr palmar splint. If it is inconvenient to obtain a proper form of curved palmar splint, a flat splint may be applied to the dorsal surface of the radius, for it presents no curve, but is straight. Bond's splint, so frequently employed in Philadelphia, is dangerous to the future contour and utility of the limb, and should never be used.

After the splint has been employed for from ten to twenty days, varying, as above stated, with the kind of fracture and disposition of the patient; it is well to substitute it by a strip of adhesive plaster two inches wide, applied circularly around the wrist, so as to give moderate support to the partially consolidated fracture.

If union has already occurred in a fracture treated without proper reduction, I should be inclined to attempt refracture and adjustment, even after the lapse of several months; provided that the fingers were very rigid or the deformity very great. It is not likely that as much can be accomplished in such cases as was possible immediately after the receipt of injury; nor should it be forgotten that very good, if not perfect use of the hand finally is compatible with a considerable degree of deformity. Rigidity of the fingers, if permitted to occur, remains, however, for many months.

### ON BURIED SUTURES.

By C. B. KEETLEY, F.R.S.C., Senior Surg. to the West London Hospital.

Buried sutures, or "sunk sutures," as they have been also called, are such as are completely covered by the skin, and do not involve that structure at all. In the form of sutures uniting the fragments of fractured bones, especially the olecranon and patella, they have long been employed, and also as sutures to united, divide nerves and tendons, as well as wounded veins, intestines, and other hollow structures. But all the above-mentioned forms of buried suture differ essentially in their objects from those to which I wish to call attention. The former have each a narrow and very limited, though, perhaps, extremely important aim. For instance, a patella is sutured with a view to getting secure bony union, a wounded intestine with a view to preventing extravasation of fæces into the abdominal cavity.

The sutures of which I now wish to speak, are employed with intent to influence the whole course and final result of wounds in general. For instance, let us suppose buried sutures of the first kind to have been used to unite the two ends of a divided nerve; the use of the other kind of buried sutures would now commence, and proceed as follows:

Whatever muscles or aponeuroses had been divided in cutting down upon the nerve would be restored to their original relationships, and kept there by aseptic animal sutures, such as carbolised gut; then the wound in the deep fascia would be separately sewn up. Finally, the wound in the skin would be closed by either catgut or silver, or whatever might be preferred. What good do we expect to get from this?



(1) We need no drainage-tubes. No spaces or pockets are left wherein blood or serum can collect, and, therefore, it does not collect. I presume that all wounded vessels, of a size such that the blood-pressure would force blood out of them in spite of the buried sutures, have been carefully secured, and that the wound is thoroughly aseptic. (2) The sutured muscles and aponeuroses are eventually perfectly restored as regards function, as also is the deep fascia. Even the deep fascia has important functions, especially in certain localities, and in connection with the following points. (3) Deep, rough, and depressed cicatrices are to be avoided. (4) Necrosis of bone and sloughing of soft tissues are prevented.

In conclusion, I have to say that it is only in strictly antiseptic surgery I would venture to recommend the use of these sutures; but that, in the case of all surgeons who have faith in antiseptic theory and practice, they will find in buried sutures an effective and beautiful addition to their methods.  
—*Brit. Med. Jour.*

### DISINFECTION.

From *Squibb's Ephemeris*.—Whether microscopic organisms be the cause or consequence of disease, or whether these organisms be in themselves or in their pabulum, or by their spores, agents of infection, it must be admitted that their agency is limited and controlled by conditions of time, place and circumstance, and that therefore these conditions become at least equal in importance to the organisms themselves. That is, there are at least two factors to the process of infection which, if not of equal value, are equally indispensable, and which bear a relation not unlike the interdependence of the sexes.

If there be a specific germ for each infectious disease, and that germ be of itself perfectly infectious, every germ should produce the disease under all conditions, and it would be only necessary to control the germs to limit the disease, and to kill all the germs would be to eradicate the disease. It is known, however, that no infectious disease has been eradicated, and it may therefore be inferred that the germs are not absolutely controllable. But it is also known that many infectious and epidemic diseases were controlled and their ravages prevented long before a germ theory was thought of, and by processes of disinfection that were not germicide in the present acceptance of that term.

It may be concluded then that the process of infection requires, first, a power to infect—or infectious matter; and second, a condition susceptible of being infected, and practically, that infection can not occur without both elements to the process. Perfect disinfection will therefore result from a control of either one of the elements essential to the process, whether the other be controlled or not. If this be true, however, it by no means indicates that either element of the process should be considered to the exclusion of the other, but rather that each should receive due attention, and thus most effort will be expended upon that element which is within easiest practical reach.

Some modification of the germ theory being admitted, then germicides become very important agents in disinfection.

Almost all that is absolutely known of a germ-proof condition is embraced in the general acceptance of the word cleanliness. Personal cleanliness may not always render single individuals germ-proof, but community cleanliness would probably render communities germ-proof, for, as a matter of fact, the cleanest districts are least affected by infectious diseases, even in epidemics when the germs are in such enormous numbers as to be present everywhere in almost equally effective force.

Therefore as uncleanness is willful and voluntary, and is never enforced or compulsory, disease from it must be regarded as the penalty of broken law, and as illustrating forcibly the expression of Emerson that "The law at the foundation of all things is retribution."

How this kind of filth, which accumulates around human habitations and becomes most hurtful where uncleanly human beings are most numerous—tends to multiply and intensify infectious diseases, is not understood, but that it has such an effect is not doubted; nor is it doubted that this effect is produced by the chemical and biological processes of decomposition. It is not then, the elements of the filth which promote infection, but the processes by which they are decomposed, and the problem for disinfection is to destroy the elements, or to prevent, arrest or modify their hurtful processes.

Disinfection, then, means either the prevention, the modification or the arrestation of these processes, whether it be in the body and its surroundings in individual cases of infectious disease, or in the uncleanness of whole communities—whether the germs be those special to a disease or those of the general processes of decomposition—and disinfection may be perfect, or as complete as is possible under the conditions of the problem, without absolute destruction of the germs or poisons.

It matters little practically whether a given agent kills the germs or so modifies the conditions around them as to render them harmless, as antiseptics appear to do even when not in sufficient proportion to be germicides.

Antiseptic dressings to wounds and injuries, whether acting as true disinfectants or germicides, or merely as systematic forms of scrupulous cleanliness, have done so much to reduce mortality and mitigate suffering that their value can hardly be disputed.

A very large number of chemical substances appear to be actively disinfectant in this sense. Selections from them are generally made for such uses in proportion to their activity and low cost, and thousands of experiments are on record attesting their efficacy and comparative value. If any of these antiseptic substances or anti-ferments be added to filth in proportion sufficient to prevent or arrest the septic processes or fermentations until the filth dries up, or is washed away, it serves the purpose of a true disinfectant, though it may not kill a single germ among the millions, dry germs being harmless and being destroyed in vast numbers by natural causes.

In this kind of disinfection the chlorides and nitrates appear by long experience to be most effective.

The intended drift of all this is to suggest that there are two distinct methods of disinfection which should be applied together, but which are still entitled to be considered separately, because they may be, and often have to be practiced separately, especially when epidemic forms of infection are to be prevented or combated. The one method is to destroy the infection and the other is to change its pabulum from a condition of susceptibility to one of insusceptibility, wherein infection becomes more or less inoperative and harmless.

## TWO CASES OF LIGATURE OF THE COMMON CAROTID ARTERY FOR TRIGEMINAL NEURALGIA.

By JOSEPH Q. HUTCHISON, M.D., Surgeon to the Brooklyn Hosp., N. Y.

From the *Proceedings of the N. Y. Surg. Soc.*—Dr. Hutchison reports two cases and gives the following recapitulation of the operations.—First Case: (1) Removal of the right upper molar tooth was followed by relief from pain for three weeks, although there had been no pain in the course of the superior maxillary nerve at any time. (2) Removal of the alveolar process of the lower jaw gave complete relief for more than five months, but how much longer I cannot state. (3) Excision of inferior maxillary nerve relieved the pain for three years. (4) Ligature of the left common carotid resulted in relief from the neuralgia for three years and eight months. No cerebral symptoms followed the operation, and none has appeared after a lapse of nearly four years.

Case second:—(1) Incision of the scalp with no benefit. (2) Excision of the branches of the supraorbital nerve near the supraorbital notch, and at the same time incision of the infraorbital filaments of the superior maxillary

nerve near the infraorbital foramen, relieved the neuralgia for six months. (3) Removal of half an inch of the superior maxillary nerve from the infraorbital canal was followed by freedom from pain for an unknown period of time. (4) Excision of the superior maxillary nerve in the infraorbital canal was repeated ten years after the last operation, but the neuralgia returned as soon as the incisions had healed. (5) Ligature of the right common carotid, twelve years after the last operation. There was no relief from pain, and no cerebral symptom followed the operation. (6) Removal of the superior maxillary nerve from the infraorbital canal a third time, a little more than ten years since it was last removed. During the two and a half months after the operation that he was under observation he was free from pain, but then began to complain of neuralgia in the inferior maxillary nerve. I now lost sight of him.

The operation of tying the common carotid artery for trigeminal neuralgia, which was first recommended and practised by Nussbaum and Patrubau, has been practised by other surgeons with a fair amount of success.

### TREATMENT OF LOOSE CARTILAGE OF THE KNEE-JOINT.

By ALEXANDER HAUDEN, M. D., New York.

For the treatment of loose cartilage in the knee-joint there have been devised, baring the radical cure by direct or indirect incision, several means, none of which have proven as efficacious as the following method.

By manipulating the cartilage (case given) I got it up beside the upper border of the patella, and thought if I could only keep this little body in that position, and retain it there by some appliance which would at the same time occlude the passage through which it got down into the joint, I would have accomplished the desideratum, which rest, splints, and bandages failed to do.

Accordingly, the most practical appliance I could obtain at the time for this purpose was an infant's double truss, placed so that the two pads pressed upon the lower end of the femur between the condyles and the patella, with the greatest pressure on the former bone. This fitted it quite well, and demonstrated the practicability of my idea.

I accordingly gave orders to have a single steel spring made with pads to press on each side of the patella, the curvature of the spring being so formed as to clear the popliteal space behind and so as not to interfere with flexion of the leg, and of sufficient strength to close the canal while the limb was in a straight position.

A small strap may be fastened to the pads over the patella, and tightened to suit the convenience of the patient, and which may help to keep the spring in a more fixed position; this, though, is not entirely essential. This apparatus has so far succeeded that from the time of its application to the present day the cartilage has never slipped down to give him trouble, and the patient has been about pursuing his business without the least inconvenience from it.

### THE USE OF BOROGLYCERIDE.

By S. MAC. SMITH, M.D., Resident Phys. at the Germantown Hospital, Philadelphia.

From the *Medical News*:—In the wards of the Germantown Hospital and Dispensary this comparatively recent compound, "boroglyceride," has been employed with such decided success and encouragement that some observations on the use of same will be of interest to the profession.

Boroglyceride is a marked hæmostatic, antiseptic, deodorant, and germicide, and prevents and arrests fermentation and putrefactive changes.

When applied to wounds, mucous membranes, etc., there is usually experienced a smarting sensation, which quickly subsides; it frequently renders a previously painful wound absolutely painless.

If, after minor amputations, the flaps be turned back, a 25 per cent. solution applied freely, and the edges of the wound coaptated nicely, capillary hemorrhage will be found to have been arrested and granulations promoted, but usually union by first intention is seen.

In anaplastic operations this agent will be found invaluable.

Chronic ulcers, which have resisted the ordinary mode of treatment, have readily yielded to applications of a 50 per cent. solution of boroglyceride, being first washed with alcohol.

Several chronic suppurating buboes, which, the patient claimed, resisted all manner of treatment for about two years, promptly yielded to boroglyceride 50 per cent. solution and alcohol, used in the manner stated above.

In cases of gonorrhœa and gleet, this agent, with carbolic acid, used as an injection, will be found quite efficient and reliable. Also, where the urethra is subjected to irritation from passing a bougie, sound, etc., a weak solution used as an injection will be beneficial to allay the inflammation thus produced.

Gynecologists will also find this agent of much value in metritis, endometritis, vaginitis, leucorrhœa, etc. Boroglyceride, with carbolic acid, will render valuable service, and frequently accomplish the desired result with greater rapidity than the ordinary agents. A tampon can be left in the vagina, "first being moistened with boroglyceride" for six or eight days without becoming offensive.

Most inflammatory diseases of the skin, especially those of an itching or burning nature, are greatly benefited by this therapeutic agent.

In cases of inflammation of the throat, as tonsillitis, pharyngitis, etc., a 50 per cent. solution, diluted about one-half with water, and carbolic acid added, used as a gargle, has rendered most satisfactory results. Tannic acid may be added with advantage; great relief is also afforded in cases of acute coryza, by diluting a 50 per cent. solution one half, and drawing it through the nares by a forced inspiration.

The ointment of boroglyceride, "unguentum boroglyceridi," appears especially adapted to, and efficacious in, the treatment of ocular diseases, more particularly, perhaps, on account of its convenient form, and being more suitable to add other ingredients. The following is the formula for making the ointment: *R.* Boroglyceride, 50 per cent. solution in glycerine;  $\frac{3}{4}$  ij; vaseline,  $\frac{3}{4}$  vi; ol. rosæ, q.s. *M.*

Heat the boroglyceride, and, while hot, add it slowly to the vaseline, stirring it constantly until thoroughly mixed.

#### THE DRY TREATMENT OF CARBUNCLE.

Dr. C. H. HUGHES, of St. Louis (*Weekly Med. Review*) defines the dry method as "an unirritating treatment without poulticing or cutting." His plan is as follows:

The carbuncle is first cleansed with a five or ten per cent. solution of creosote, carbolic acid or chloral; the weaker or stronger solution according to the stage of destruction the opening being injected lightly. After this washing, dry the part with absorbent cotton (formerly, I used lint), and then apply tannin freely so as to thickly cover the whole carbuncular surface. Over this apply a piece of patent lint thickly spread with simple cerate. Let this dressing remain from twenty-four to forty-eight hours. Then renew the washing and the dry dressing.

Sphacelated membrane may be removed with the dressing forceps from time to time and very slight cuts may be made to facilitate this. But the carbuncle does better if not irritated by the knife at all. Morphine may be sprinkled sparingly with the tannin for anodyne purpose if desired. The less a carbuncle is irritated by knife or caustics or untimely pulling at dead membranous shreds the better.

The less its vessels are dilated and circulation stimulated by warm poultices the better. There would be no objection to very hot water to the skin around the carbuncle.

The internal treatment is muriated tincture of iron, glycerine and arsenic, separately or combined, suitable laxatives, a highly nourishing diet and chloral hydrat in full hypnotic doses every night, not only for its tranquilizing and restful effect upon the cerebro-spinal centres but because of its antiseptic power.

Very moderate quantities of the opiates (just sufficient to keep the patient free from pain and give a tonic support to the nervous system during the day) are likewise advisable, though I have treated very bad cases without opium and they had but very little pain.

A patient with carbuncle ought never to be sent to bed, though he may have to take his bed. He ought never to be put on a low diet, and while he ought to be enjoined to refrain from harassing business work and worry from the very beginning (for carbuncle is always associated with constitutional breakdown, most unusually in the nervous system as well as with blood impoverishment), he should not be alarmed by suggestions of a probable fatal termination, but should be advised to keep out-doors, in good weather, all he can, taking exercise in a passive way, even if he only sits at a window or in a doorway on the sunny side of his house.

The following formula represents the writer's ordinary prescription for internal use:

R. Tr. ferri chl., ℥xx; glycerinæ, ℥xl; liq. potas. ars., ℥jjj. M. S. Give three times a day in a glass of water through a tube.

The iron may be given as freely as in erysipelas. When it is so employed the Fowler's solution must of course be omitted from all but three or four of the doses daily.

### COCAINE IN THE MORPHINE HABIT.

From the *Weekly Medical Review*, Aug. 1, 1885:—The extravagant assertions of Freud and Pollack, that cocaine is an antagonist to morphine and an infallible cure of the morphine habit, are to be considerably modified, if the results of Erlenmeyer are correct. Like many other therapeutic innovations the coca-treatment of morphinism originated in the United States in 1878. In the succeeding two years about sixteen cases of successful cures of the habit were reported. Freud assumes that the method has become a firmly established and acknowledged one. Erlenmeyer, however, concludes, and correctly so, that the method of treatment by coca and its known preparations had been abandoned on account of its uselessness.

In order to test the efficacy of the cocaine-treatment, Erlenmeyer employed Merck's drug by hypodermic injection in two hundred and thirty-six cases. His results are contained in the *Centralblatt fuer Nervenheilkunde*, July, 1885.

The qualitative effects of cocaine upon morphine eaters was in all cases the same. The phenomena differed only in degree.

Erlenmeyer thus formulates his results:

First. Muriate of cocaine, when introduced in daily doses of one and two-third grains (0.1), does not affect the cerebrospinal system at all. Neither the centres of voluntary movement nor those of conscious sensation exhibited the slightest disturbance of function. There occurred neither spasm nor paralysis, neither psychical excitation nor sleep or stupor.

Second. In doses of one-tenth grain (0.005) or thereabouts, a paralyzing effect on the centres of the vascular system ensued. This vasomotor paralysis was manifest by increased frequency of the pulse, dilatation of the arteries, diminution of arterial tension, perspiration and elevation of temperature. The vascular paralysis was transient.

Third. Cocaine produced subjectively sensation of warmth, both local and of a more general nature. If the injection was made while the stomach was empty a disagreeable, almost painful, sensation of pressure and spasm in the epigastrium ensued. Following doses of one grain, or frequent repetitions of smaller amounts, there occurred disagreeable, harassing restlessness and sinking faintness.

All in all, Erlenmeyer is not much impressed or elated by his experience. He states that many patients refused to continue the treatment because of the annoying symptoms above referred to. The patients, in whom cocaine was substituted surreptitiously for morphine, promptly discovered the deception.

Erlenmeyer says that while cocaine does modify and mitigate the so-called phenomena of abstinence, its effect is only transient and of brief duration. He regards the remedy as of trifling value as a substitute for morphine.

From *Squibb's Ephemeris*:—Many physicians, as well as the subjects of the habit, and their friends, loose sight of the circumstance that this habit is a vice, like the alcohol habit, and not a bodily disease to be dosed—and this vice absolutely beyond the scope and reach of medication. Almost as well might they expect to cure lying or stealing by doses of drugs. The writer, in common with many others, has known many cases of this habit, and some recoveries from it, but never knew a single recovery that was not due to the moral courage of the subject of the habit.

Subjects who will morally train themselves up to take hold of themselves, can break the habit, either abruptly or gradually, and will recover from its dominion and its effects. Those who will not do this, doom themselves to certain moral and physical destruction. With sufficient courage no help is needed; without it, all help is vain. Restraint either in or out of inebriate asylums or hospitals may aid effectively in breaking the habit, if a good degree of moral courage be summoned as a basis for action; but without moral courage restraint must be perpetual to be of any use.

When a subject has courage enough, and is in earnest to begin a vigorous campaign against this habit, he soon reaches a stage analagous to the delirium tremens of the alcohol habit; and here the wise and careful physician may be needed, and medication is often available, the more effective of the nervous stimulants and restoratives being the best agents. To tide over the period of greatest suffering and to relieve it somewhat, whether it be for a day or two, or for a week or two, is quite within the reach of the materia medica, and different agents will be more or less effective in different cases. Alcohol, Cannabis Indica, coffee, tea, etc., are all available, and in this class coca will take a place, but probably not as a prominent agent. But the salts of the alkaloid cocaine are not likely to be of any use.

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#### POISONING FROM CORROSIVE SUBLIMATE IN SURGERY.

Dr. A. T. CABOT, of Boston (*Boston Med. and Surg. Jour.*), in a report on surgery, gives the following:—Fränkel reports fourteen cases of death during the employment of corrosive sublimate on wounded surfaces.

In twelve of these cases he regarded the poisonous action of the drug as but one factor in the production of the fatal issue; all of them being cases of serious injury or disease. In the remaining two, however, he considered death directly caused by the corrosive sublimate. The prominent symptom in all of these cases was a bloody diarrhœa, while salivation was not noticed in any of them.

Post-mortem examinations showed in every instance an inflammation of the intestine, most noticeable in the larger intestine and accompanied by sloughing ulcerations of the mucous membrane.

All the patients were feeble, and either emaciated or abnormally fat.

Dr. George L. Peabody was induced by the above report of Professor Fränkel to investigate the records of the New York Hospital for the past eighteen months.

Eleven cases were found in which the use of this drug as an antiseptic application to wounds was followed by diarrhœa which did not yield to the usual remedies, and which sometimes ceased on the sublimate being discontinued, but which in seven cases became bloody in character, was accompanied by griping pains, tenesmus, prostration, and death.

■ In three of these seven cases autopsies were made, and in all of them a very extensive diphtheritic inflammation of the larger intestines was found.

The solution of corrosive sublimate used in these cases was usually 1 to 2,000, and the wound surface was ordinarily large.

Schede in a recent paper admits the dangers of the sublimate in certain conditions, but thinks it doubtful whether the intestinal lesions ascribed to it may not sometimes be pyæmic. Fränkel, however, carefully differentiated his cases from pyæmia, and in Dr. Peabody's patients the other lesions usual in pyæmia were absent.

Dr. Peabody concludes by saying that it is proper to state that, so far as he can learn, death or serious poisoning has not resulted from its use in dressing materials, but only after its employment in the irrigation of large wound surfaces.

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### PHOSPHOROUS NECROSIS OF THE JAWS.

By J. EWING MEARS, M.D., of Philadelphia.

Conclusions reached in a paper read before the *Amer. Surg. Ass'n*, 1885.—

(1) That phosphorous necrosis of the jaws is a local expression of the constitutional condition produced by the inhalation of the vapor of phosphorus and by particles of the agent taken into the system with the food by operatives in match factories who do not give proper attention to cleanliness of the hands.

(2) That the introduction of the agent into the system is, as a rule, very gradual, and in such small quantities as to avoid the production of symptoms of acute poisoning. That, in this way, the chronic toxic condition of the system is induced, characterized chiefly by disintegration of the red blood-corpuscles and fatty degeneration of the arterial coats.

(3) That the toxic condition precedes the development is shown by the fact that the disease does not attack operatives recently exposed to the action of the agent, but those who have been exposed for a period of years.

(4) That examination of teeth of operatives has shown that many who have a condition of caries, and that many who have returned to work immediately after the extraction of teeth, have enjoyed immunity from the disease, showing that the agent has not attacked the periosteal tissue thus exposed. (In one of the cases the disease did not appear until three months after labor in the factory had ceased.)

(5) That individuals vary in their susceptibility to the action of the poison; for this reason many suffer immediately with symptoms of acute toxic conditions, such as nausea, vomiting, etc., and are compelled to abandon work in the factories.

(6) That the conditions under which experiments have been made on animals to prove the absence of the disease until exposure of the periosteum and peri-alveolar tissue was effected were not similar to those to which operatives in match factories are subjected.

(7) That treatment of the disease in the primary stage in the manner outlined is efficient and prevents its progress.

(8) That the antidotal powers of turpentine have been established, both in neutralizing the effects of the poison upon operatives during their work and also in the treatment of the early stage of the disease.

(9) That the disease is to be prevented among operatives by the adoption of thorough methods of ventilation, stringent rules with regard to cleanliness, and the free disengagement of the vapor of turpentine in all the apartments of factories in which the fumes of phosphorus escape.

## RESPIRATORY ORGANS.

## INTUBATION OF THE LARYNX.

Dr. JOSEPH O'DWYER, of New York (*N. Y. Med. Jour.*, Aug. 8, 1885), gives a resumé of his experiments in attempting to construct a tube for the larynx, which he began nearly five years ago, and for more than a year subsequently was unaware of Bocuhut's similar attempt and failure in 1858. Dr. Dwyer says:

The tubes I am using at the present time differ in every respect, except length and caliber, from any heretofore tried. In order to give greater freedom of action to the epiglottis in protecting the aperture of the tube during the act of swallowing, I have given the upper extremities of these a slight posterior curve, with some degree of obliquity from before backward and upward, and, from my limited experience with them, deglutition is certainly less difficult than with the straight ones formerly used. It is evident that the deglutition of fluids can never be perfect with any form of tube in the glottis.

The device adopted for preventing their expulsion consists in increasing the narrow transverse diameter about the center, without changing the caliber, so as to make the tube at this point almost cylindrical, and gradually inclining upward and downward somewhat in the shape of a double wedge. In the few cases in which I have used this modification it has proved self-retaining, and, should it continue to do so on a more extended trial, I believe there will be very little scope for further improvement, except, possibly, to increase the length so that it will reach still closer to the bifurcation, which would be of doubtful utility, as, after a very considerable experience in the dead-house, I have never yet found an exudation thick enough to produce obstruction in the lowest and widest portion of the trachea without at the same time having extensively invaded the bronchial tubes.

All my work, up to a very recent period, has been of a purely experimental character, and I am not prepared even now to say that further modification of these tubes may not be necessary in order to make them absolutely self-retaining, without which they would not be available for general use. At the same time, I will venture the prediction that in the near future it will be recognized by the profession as a legitimate and valuable method of overcoming obstructions in the upper air-passages with a rapidity by no other means obtainable.

For instance, in two of my cases of diphtheritic croup that ended in recovery, the cannula was worn in each for the space of ten days without the slightest impairment of the vocal apparatus, and from this it is reasonable to infer that it would be tolerated in the healthy larynx for a much longer period, and probably, if worn intermittingly, for an indefinite period.

The following is the method of introducing the tube, which is done without the use of an anæsthetic: The child is held upright in the arms of a nurse and the gag inserted in the left angle of the mouth, well back between the teeth, and opened widely; an assistant holds the head, thrown somewhat backward, while the operator inserts the index finger of the left hand to elevate the epiglottis and direct the tube into the larynx. The handle of the introducing instrument is held close to the patient's chest in the beginning of the operation, and rapidly elevated as the cannula approaches the glottis. As soon as the obturator is removed, and it is ascertained with certainty that the tube is in the larynx, the thread which is attached for the purpose of removal, should it be found to have passed into the œsophagus, is withdrawn, but at the same time the finger is kept in contact with the tube to prevent its being also withdrawn.

Its removal is accomplished in a similar manner; but, as it is difficult, on account of the struggling of the child, to guide the extracting instrument into the narrow aperture of the tube, I prefer to give an anæsthetic for this purpose.



## THE TREATMENT OF HAY FEVER.

Dr. E. FLETCHER INGALS, of Chicago (*Chicago Med. Jour. and Exam.*), gives the following conclusions:—

1. Nearly all cases may be cured by systematic, thorough, superficial cauterization of the hypersensitive portions of the nasal mucous membrane, providing the treatment is carried out during the interval between the attacks.
2. The most effective and least painful means of accomplishing this is by the galvano-cautery.
3. Care must be exercised to treat every sensitive spot and not to cauterize too large a surface at once.
4. The operation may be made painless by a proper use of hydrochlorate of cocaine.
5. In nervous subjects general treatment must not be neglected.
6. The effects of cocaine in hypertrophic catarrh, and in the case of idiosyncratic coryza which he reports, render it highly probable that it will give much relief in many cases of hay fever.

## HYPERTROPHIED TONSILS.

Dr. A. W. CALHOUN, of Atlanta (*Atlanta Med. and Surg. Jour.*), in a clinical lecture says that:—

One among the most frequent cases of chronic deafness is the long-continued irritation in the Eustachian tubes from hypertrophied tonsils in children. It is a disease peculiar to childhood, beginning very early in life, and is frequently congenital and hereditary. Almost always the disease attacks both tonsils—very rarely does it attack only one.

In nearly all such cases, characteristic symptoms accompany the disease, viz.: difficult breathing, especially at night, sleeping with the mouth open because of the obstruction in the posterior nares, caused by the enlargement, muffled voice, more or less chronic pharyngitis, and as the result of breathing through the mouth, cracked and broken teeth. The alternate contact of hot and cold air upon the teeth causes the disintegration of them, but the great danger is the deafness that usually follows long-continued hypertrophied tonsils, by reason of the extension of the inflammation into and more or less pressure upon the mouths of the Eustachian tubes.

Children sometimes outgrow the disease, but while they are outgrowing it the danger to the hearing is constantly increasing; hence the necessity of active treatment in all children who have enlarged tonsils and the necessity of disregarding the advice to "let them alone, they will outgrow it."

It is just as necessary for good hearing that air should circulate unobstructedly through the Eustachian tubes as it is necessary that air should pass unobstructed into the lungs for good breathing. It is too often the case that we see young adults with more or less impairment of hearing, as the result of a previously long-continued mechanical irritation in the throat and post-nasal region from enlarged tonsils, even though the enlargement at this period—the adult period—may have entirely disappeared. Proper attention to the tonsils at the proper time in childhood, would have preserved the hearing and relieved the child of a great annoyance.

The causes of this disease are numerous, but in children, when not congenital or hereditary, it is the result of frequent catarrhal sore throat. The prognosis of all these cases is favorable if the proper treatment is instituted in time.

The treatment is very simple, but very radical. Only one thing is of any service, and that is excision of the tonsils. In my hands all other treatment has been not only of temporary benefit, but a great trouble and annoyance both to the child and the parents.

I read a pamphlet by a Frenchman some years ago, who advanced the original idea that removal of the tonsils "unmanned the patient, and that all the powers of procreation were lost." He failed to say what effect it would have upon the females. I mention this statement as a mere curiosity, for there is not the slightest evidence to corroborate the assertion.

The hemorrhage that follows the operation is not great, usually stopping of its own accord in five minutes, but if it should not, it is easily checked by means of gargling salt water, or, if necessary, a few drops of muriate tinc. of iron in water may be gargled. Out of several hundred operations I have seen but one case of serious hemorrhage and that was secondary.

The after treatment consists of salt water gargle, fluid diet and good care for three or four days; the parts soon heal. It is well for every operator to become ambidexter, as by that means he can save a great deal of trouble.

Don't hesitate to remove tonsils when they are very much enlarged, and are a mechanical obstruction, and don't have any fears of "unmanning" your patient.

#### RHINOLITHS.

Dr. R. E. BEACH, of Vandalia, Ill. (*Medical Record*) reports two cases:— Twelve years ago a child was brought to him for advice concerning a catarrhal affection of the nose which had existed for eight months. The doctor's suspicions having been aroused by the fact that the right side only was affected, he made a careful examination, and discovered a foreign body resting upon the middle turbinated bone. It was dislodged by slight traction with the forceps, and was found to be a rhinolith having a small seed for a nucleus. The second case was that of a little girl, four years of age, who had been suffering from a nasal catarrh for about eighteen months. The father asserted positively that the child had never introduced anything into the nose. Inspection showed an object lying on the floor of the right nasal fossa near the posterior termination of the inferior turbinated bone. The mucous membrane was much swollen, and covered completely the upper portion of the foreign body. The latter was slightly movable, and was supposed to be a detached sequestrum. Its removal being determined upon, the child was placed under chloroform, and the object was withdrawn by a hawk-bill forceps. It was found to be a calcareous body of oblong shape, three-fourths of an inch in its longest and one-half inch in its shortest diameter, and containing a cherry-pit as a nucleus. Dr. Beach says that he can recall numerous instances of the introduction of foreign bodies into the nostrils, and he insists upon the necessity of a careful and thorough examination of the nasal cavities in every case of catarrhal affection, especially when occurring in children.

#### VEGETATIONS OF THE PHARYNGEAL VAULT.

Dr. CRESSWELL BABER, of Brighton, Eng. (*Annales des Mal. de l'oreille, du Larynx, etc.*), says that these adenomata are as well removed by the finger-nail, which should be  $\frac{1}{4}$  inch long, as by instruments. He was successful in 18 cases. His method is to scrape them vigorously with his finger-nail once a week, for three or four weeks, when they have usually disappeared. The naso-pharynx must be inspected once weekly thereafter for a time to note recurrence. The first scraping usually produces in considerable hemorrhage. The method is originally that of Guye of Amsterdam. I have myself succeeded in curing two cases after this method. The finger should be protected from the teeth of the young patients, these vegetations always occurring in children. They are soft and friable and their rupture by the finger-nail causes them to suppurate away. In one of my cases they hung like stalactites from the vault and were numerous enough to cause great deafness and almost total occlusion of the posterior nares.

#### PERFORATION OF THE SEPTUM NASI.

Mr. JONATHAN HUTCHINSON (*Medical Times and Gazette*) states that there exists a general belief that perforating ulcers of the septum of the nose (the cartilage) imply syphilis, whereas he feels sure such inference is often incorrect.

In his experience syphilis prefers the bony septum and very rarely attacks the cartilaginous portion. The trouble to which the author refers is not uncommon, and sometimes exists without the patient's knowledge. He believes that constant irritation by the finger-nail induces death of the perichondrium at a small point on the septum. This slowly extends—the cartilage atrophies—a small perforation occurs, which may occupy many years in reaching  $\frac{1}{4}$  inch in diameter. The only annoyance is the presence of small scabs on the unhealed edges, which irritate and cause a desire to blow the nose. Their whole history, appearance and situation are totally unlike syphilitic perforations. The edges often obstinately refuse to heal under any kind of treatment. A physician who consulted him had, during fifteen years experience of such a perforation in his own case, tried every possible method of treatment to heal the edges without avail.—*St. Louis Medical and Surgical Journal*.

## CIRCULATORY ORGANS.

### INJURIES OF THE MAIN BLOODVESSELS IN THE AXILLA CAUSED BY EFFORTS TO REDUCE DISLOCATIONS OF THE SHOULDER.

By LEWIS A. STIMSON, M.D., Prof. of Clin. Surg. in the Univ. of the City of New York, etc.

From the *Trans. N. Y. Surg. Soc.*:—Dislocation of the shoulder, when recent, is an injury of minor gravity, the cure of which can be effected readily and without risk to the patient. But, from time to time, cases are reported in which the gravest consequences have followed reduction or the attempt to reduce, and such accidents have happened and continue to happen in the practice of even the most experienced surgeons, aided by anesthetics and employing methods of manipulation rather than those of force. Among these accidents, the most frequent and most important are those of injury to the main bloodvessels in the axilla.

Although the earliest recorded cases of this accident occurred at about the beginning of the eighteenth century, the subject did not receive the attention of systematic writers on surgery until after the publication, in 1827, of an article by Flaubert.

The trustworthy recorded cases of injury to the larger vessels of the axilla in dislocation or reduction of dislocation of the shoulder are forty-four in number. Of these, the axillary vein alone was ruptured in three (Froriep, Price, Hailey), although I think the last one doubtful, and the artery and vein together in two (Platner, Baum). In most of the others the axillary artery or one of its branches was injured, but in some the source of the hemorrhage remains uncertain.

Of twenty-nine cases in which the age of the patients is given, in twenty they were more than forty years old. The youngest was twenty (Gärtner), the oldest eighty-six (Sands). In very few of the cases it is noted that the arteries were atheromatous, although the advanced age of many of the patients makes it probable that the elasticity of the vessels was diminished.

In more than half the cases the dislocation was recent—less than three weeks. In not more than one-third of them is it reasonably certain that the lesion was caused during reduction; in three cases it was certainly caused by the dislocation; in the remainder the cause is obscure. To these latter belong those cases in which the reduction was promptly effected, and without the use of much force or of exaggerated positions of the arm.

In many of the others the attempt to make reduction was greatly prolonged or several times repeated, and the force used was very great or improperly applied.

Leaving aside the earlier cases in which faulty methods no longer in use were employed, and those old dislocations in which the relations and connections had been permanently changed by fibrous or bony tissue of new

formation, it becomes evident that in dislocation of the shoulder the accident is most to be apprehended when the elbow is raised in abduction to the height of the shoulder, or is carried, as in Callender's case, across the chest and face in a wide movement of circumduction; and for this reason, that in these movements the dislocated head of the bone is turned downward into the axilla, and the vessels which lie upon its inner side are pressed down before it and forcibly put upon the stretch, while those branches which run almost directly outward, the subscapular and circumflex, and are fixed to the tissues amid which they branch, are directly and forcibly elongated.

If the dislocation is an old one, and especially if there has been much inflammatory reaction and the vessels have become firmly adherent to the bone or embedded in unyielding cicatricial tissue, the liability to rupture is increased because the loss of elasticity occasioned by the latter condition, and because of the limitation of the strain to a shorter segment of the vessel in the former. If, in addition, the distensibility of the vessel has been further reduced by atheroma, the danger is still greater; and this last predisposing cause may properly be deemed sufficient to lead to the rupture even when the traction is slight and the manœuvres are confined within a narrow range.

The symptoms at the beginning present two widely different forms; in one, the less common, a tumor presenting many of the signs of an encysted aneurism appears in the axilla a few days or weeks after the reduction, and increase in size rather rapidly; if not successfully treated, it soon involves the skin and ruptures externally. In the other form, the more common, a diffused fluctuating swelling, without bruit or pulsation, appears immediately, or within a few hours, in the axilla, raising the pectoral and deltoid muscles, or is, perhaps, most prominent posteriorly, and in most cases promptly reaches a large size, even that of the adult head (Lister); the radial pulse sometimes persists.

It several cases the patients died promptly after the accident. In most of the others the swelling increased, and, in a longer or shorter time, ruptured spontaneously, or was threatening to rupture when operative interference (puncture, incision, or ligature of the subclavian) was resorted to. The longest period was in Bellamy's case, six months after reduction, and even in this case the first hemorrhage occurred five weeks after reduction.

In the cases that recovered without operation (Agnew, Sands, Malgaigne, Desault, Anger, Nélaton's second case) the swelling subsided, and the ecchymosis was slowly absorbed.

Although the diagnosis, so far as the general nature of the accident, rupture of a bloodvessel, is concerned, does not long remain obscure, the identity of the injured vessel cannot always be determined. If the tumor pulsates, the diagnosis of rupture of an artery may be made; and if, in addition, the radial pulse is present, it is extremely probable that the injured vessel is not the main artery, but that one of its branches, probably the subscapular or circumflex, has been ruptured or torn off at its origin. Beyond this it does not seem at present possible to go with much certainty, although the great preponderance of arterial lesions in the known cases—twenty-six out of twenty-eight—makes it highly probable in any given case that an artery, and not the axillary vein, has been torn.

*Concerning Treatment.*—A fair inference is that conservative treatment may properly be tried at first, but should not be prolonged if the symptoms do not promptly yield; and secondly, that, in case of resort to operation, ligature of the subclavian artery or disarticulation at the shoulder is to be preferred to incision of the sac and double ligature of the artery.

Experience with arteries wounded under other conditions has shown that they will sometimes quite readily heal, or the opening made into them will close, under pressure actually made at the point of injury, and it would, therefore, be proper to attempt to treat this injury by direct, limited pressure.

An important question arises from these facts in connection with the treatment of dislocation of the shoulder: How far does the possibility of the

occurrence of this accident affect the choice of a method of reduction? and also concerning the propriety of attempting reduction in cases that are not recent.

In the reduction of recent dislocations, these accidents show that abduction of the arm especially should be avoided, as also circumduction, violent traction, and rough pressure in the axilla. It is also to be remembered that the injury to the vessel may be caused by the dislocation itself, and its symptoms may be masked by the swelling commonly present during the first few days.

In old dislocations the probability of the occurrence of the accident is increased by the more forcible measures usually necessary to break up the adhesions that bind the bones in their new relations; and, while it may be proper in many cases to make the attempt to restore the limb to usefulness, this possibility creates another reason for abstention when the patient is old, the duration of the dislocation long, and the adhesions firm.

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#### LIGATURE OF ARTERIES FOR ANEURYSM.

Dr. A. T. CABOT, of Boston (*Boston Med. and Surg. Jour.*), in a report on surgery, gives the following:—Mr. T. Holmes, of London, discusses at some length the question of double distal ligature in aneurysms of the innominate artery and arch of the aorta.

He thinks it a mistake to tie both the carotid and subclavian at one operation, and advises that the carotid alone be tied first. He says: "The only reason that has ever been advanced for performing the two ligatures simultaneously (in ordinary cases when compression of the subclavian gives negative results) is that there may be some inconvenience in administering an anæsthetic twice, and some additional mental disturbance in submitting to two operations. But surely this is somewhat fanciful, . . . and the experience of the double-distal deligation proves that there is no inconvenience in thus dividing the treatment into two stages, even if we were quite sure that the second stage would be called for, which is far from being the case."

Mr. Holmes concludes his interesting articles by saying, "One thing has been abundantly proved by the tolerably long series of operations now on record for thoracic aneurysms, that far more success has been attained by the distal ligature than by electrolysis or by any other form of treatment. And good reason has been shown for preferring the isolated ligature of the carotid artery as the first step in the treatment unless there be some definite indication for tying the subclavian at the same time."

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#### ALIMENTARY ORGANS.

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##### PENETRATING PISTOL-SHOT WOUND OF ABDOMEN—

##### LAPAROTOMY—SUTURE OF INTESTINES—

##### PELVIC HEMATOMA—RECOVERY.

By JOHN B. HAMILTON, M.D., Supervising Surgeon-General U. S. Marine Hospital Service, Prof. of Surg., Univ. of Georgetown, etc.

From the *Jour. Amer. Med. Ass'n*, Aug. 22, 1885.—Notwithstanding the manifest soundness of the arguments in favor of operative interference in case of penetrating wounds of the abdomen, the weight of modern authority

as indicated in the surgical text books is still against it, and it is only by the reports of cases where an actual test is made upon the human subject that the truth will ultimately prevail. The careful and conscientious experiments of Parkes upon dogs, while carrying conviction to the minds of many, are yet met by the masses with the objection so quaintly urged by Turner, that "the comparative anatomy is not a sufficient foundation for us to go upon, in taking experiments thence, cat's guts and man's being so widely different in their texture. We have many instances of these parts wounded in brute creatures, and, after sewing up again, they have been let go to lick themselves whole on the outside, while nature is playing the surgeon within. Nay, Dr. Musgrove acquaints us that he took out the cæcum of a bitch, carefully tying up the vessels and stitching up the divided parts, when in three weeks time she seemed as well as ever."

To the case recently reported by Dr. Bull, of New York, I now add the following:—

J. W. Wood, a mulatto, æt. 19, a waiter at the Tremont House in this city, was accidentally shot by a pistol carrying a 32-calibre ball. The wound was received at 2.10 p.m., and he was taken to the Providence Hospital. There was considerable shock. I examined him at 4.20 p.m., and found that the missile had entered the skin about an inch to the right, and an inch above the navel. A flexible Nélaton probe following the track of the ball passed downward and inward under the rectus muscle and entered the abdominal cavity. The probe was withdrawn and the patient etherized. There were present—Surgeon J. C. McKee, U. S. Army; Surgeon G. W. Stoner, Marine Hospital service; and Dr. D. P. Hickling, the House physician. The belly having been shaved, and washed with solution of bichloride mercury, an incision was made in the linea alba about six inches long, the peritoneum raised and incised. A spurting artery was seen in the mesentery, and the abdominal cavity was full of blood. The artery was immediately tied with a fine catgut ligature, the intestines drawn out loop by loop, and the wounds stitched with Lembert's suture as fast as they could be reached. Eleven wounds requiring suture were found in the small intestine, and two in the ascending colon. The wounds varied in size from a mere nick in the wall of the intestine, to those where the ball had passed directly through it, and all were everted, the mucus surface pointing out.

The was no fecal extravasation, doubtless owing to the fact that less than two hours had elapsed from the time of receipt of the injury, but a cante-loupe seed was seen and removed from the mesentery. The omentum was cut by the ball in several places, and as it was difficult to stop the oozing, a ligature was placed around the wounded mass and it was cut off. All sutures and ligatures used were the finest size of carbolyzed catgut. The abdominal cavity was then sponged with solution of bichloride of mercury, cleaned and dried, and the incision carefully closed with deep sutures of silver wire and superficial ones of silk. Narrow strips of adhesive plaster were then placed across the incision about an inch apart, a square of sublimated gauze laid upon it, and iodoform dust over the gauze and the surface round about. A broad flannel bandage was then placed snugly over the abdomen, the patient placed in bed, and as there was still some shock from the combined effects of the anæsthetic and the wound, he was surrounded with bottles of hot water. Reaction took place shortly, and he was given .06 gm. of opium every three hours.

The clinical history in detail follows and terminates with the discharge, cured, of the patient, August 8, twenty-eight days after the receipt of the wound.

The record of this case, kept so accurately by Dr. Hickling, I have transcribed at the risk of being tedious, but I do so that one may be impressed with the incalculable care and patience required to successfully treat these cases. The conclusion of the operation was, as will be seen, by no means the end of the anxiety. The bullet was passed per rectum.

As the patient's recovery prevented an actual observation of the cause of the hematoma, I can, of course, only offer a conjecture, and that is that oozing continued from the mesentery, there was a large nick chipped out of the

connective tissue next the small intestine in one place, which as the ball did not penetrate the intestine nor rupture an artery, I did not think it worth while to tie in mass. I now think the spot should have been touched with caustic or some styptic.

*Literature.*—The following opinions are interesting:—

"But if the great intestines be wounded, and the excrements discharge that way, it may be reasonable to lay open the wound and stitch the gut with the glover's stitch, sprinkling it with some of the aforesaid agglutinatives, and, reducing it back, stitch up the external wound of the belly, as hath been said."—*Wiseman*.

"But a question may be asked here whether a surgeon may not prudently, in this case, enlarge the wound of the abdomen, that he may be able to discover the injured intestine, and treat it in a proper manner. Truly, I can see no objection to this practice, especially if we consider that upon the neglect of it certain death will follow, and that we are encouraged to make trial of it by the successes of others. Scacherus, in *Programmati Publica*, Leipzig, ed. 1720, mentions a surgeon who performed this operation successfully."—*Heister*.

"With very few exceptions, bullet wounds into the abdominal cavity are fatal. It may be a question worthy of serious thought, in view of the hopelessness of our present practice, whether we ought not to cut boldly into the abdominal cavity, wash out the filth, and, bringing the wounded intestines to the surface, endeavor to produce an artificial anus."—*Andrews*.

"In examining the external wound, when no protrusion exists, should we find an escape of fecal matter—which proves that the bowel has been perforated—the abdominal wound must be enlarged, and the wound in the intestine closed by suture. This is the only expedient for saving life, for if the contents of the bowel are allowed to escape into the peritoneal cavity, a fatal issue must be expected."—*Chisholm*.

"Already interference contrasts favorably with the do-nothing system. Reflection upon the results of ovariectomy; upon the results of gastrotomy and enterotomy, applied to protruded wounded viscera, leads unavoidably, in the writer's opinion, to a conviction of the propriety of incising the abdominal wall when necessary in order to expose and sew up the wounded gut concealed within the cavity, whether divided by a cutting instrument or shot. The obstacles to success are obvious, but it is a mortal peril which demands an extreme remedy."—*Otis*.

"I have the deepest conviction that there is no more danger of a man's dying of a gunshot or other wound of the peritoneal cavity, properly treated, than there is of a woman's dying of an ovariectomy, properly performed. . . . And, by the application of the same rules that guide us in ovariectomy to the treatment of gunshot wounds penetrating the abdominal cavity, there is every certainty of attaining the same success in these that we now boast of in ovariectomy."—*J. Marion Sims*.

"When any of these conditions are present, the duty of the surgeon is clearly to enlarge the opening in the abdominal wall, or to make a new one in a more favorable location, sufficiently to admit of examination of the viscera in the track of the wound, to detect and ligate bleeding vessels, to suture intestinal rents, and to thoroughly cleanse the peritoneal cavity of extravasated matters."—*Pilcher*.

"Primary abdominal section in the mid-line, gives the best command over the damage done, and furnishes the most feasible opening through which the proper surgical treatment of such damage can be instituted. Further, its adoption adds but little, if anything, to the peril of the injury."—*Parke*.

"I desire now to call attention to the fact that operative interference for gunshot wounds of the abdomen has been put to a practical test, and that it has been successful, and I hope that other members of this society may share my conviction that this plan of active treatment is now justified by these two successful cases, and that it should be adopted (within proper limits), to the exclusion of the 'let-alone policy.'"—*Bull*.

## OBSERVATIONS ON THE TREATMENT, MEDICAL AND SURGICAL, OF ACUTE PERITONITIS.

Dr. T. HERRING BURCHARD, of New York (*Trans. N. Y. Acad. Med.*), in a paper in which he reported forty cases of laparotomy for injuries to the abdominal viscera, either from external or internal violence, said:—In no disease was an *early* knowledge of the causation of the attack so essential.

Under a systematically conducted examination, which sought to find a satisfactory explanation for each abnormal symptom, it was surprising how the difficulty would disappear. It was to a want of thoroughness in the examination and a lack of the judicial element in weighing symptoms, rather than to inherent difficulties, that the diagnosis often seemed so obscure.

The diagnosis being made, and a local lesion amenable to surgical interference being demonstrated, surgical relief should be rendered at the *earliest moment practicable*.

What, under the circumstances, were the indications for treatment?

Dr. Burchard then referred to the paper read in this hall, by J. Marion Sims (*British Medical Journal*, December 17, 1881), who sounded the keynote of the future treatment of such cases when he said, "Given a case of perforation of the intestines, and given an accurate diagnosis, which is by no means difficult, what are we to do in the present state of our knowledge? Why, of course, we should open the abdomen promptly, clean out the peritoneal cavity, search for the perforation, pare its edges and bring them together with sutures, and treat the case as we now treat other cases involving the peritoneum. "Rest assured," he says, "that the day will come—and it is not far off—when an accurate diagnosis in such cases followed by prompt action will save life that must otherwise quickly ebb away."

The point raised by Dr. James R. Wood, in the discussion on Dr. Sims' paper, to which reference had already been made, viz., that "pathological surgery, or operations done for tumors and disease, was very different in its result from traumatic or acute surgery, and that this was specially true regarding manipulation of a large serous membrane that resents all impertinent interference," did not, it seemed to him, afford a sufficiently logical basis for doing or not doing the operation. As a clinical fact, the peritoneum was exceedingly tolerant of interferences, provided the proper precautions were observed.

Laparotomies performed for internal traumatism, 21, with 13 deaths and 9 recoveries; laparotomies performed for external traumatism, 3, with 1 death and 2 recoveries; laparotomies performed for peritonitis, 16, with 3 deaths and 13 recoveries.

After which he read the history in full of his own case, which occurred in a man, twenty-six years of age, in whom an omental abscess burst into the peritoneal cavity during an acute peritonitis. Laparotomy was done, and the patient made a good recovery.

If these 40 cases with 24 recoveries teach anything, they teach not merely the feasibility of such operations, but, more than that, they give us legitimate ground for encouragement in fully sixty per cent. of these otherwise hopeless cases.

*The Medical Treatment of Peritonitis.*—Concerning this there were some points of special interest, and first, the opium treatment, which, while it was our sheet anchor in the treatment of peritonitis, there were certain conditions in the course of the disease in which the drug could only be used with the greatest caution. The indiscriminate use of opium, even in peritonitis, was quite capable of doing more harm than good.

Regarding the use of opium, freedom from pain was the ideal condition to be secured, irrespective of the quantity of the drug administered. When this was attained, sleep, from which a patient could be readily aroused, followed as a natural consequence. Opium, or its alkaloid morphine, should be administered.

*External Applications.*—Poultices are not curative. Cold, judiciously employed, lowered temperature, reduced inflammation, relieved tympanites, and secured nervous tranquility. There was but one way of employing cold, and that was by the *ice-coil*.



*Diet.*—For diet nothing was comparable with peptonized milk, to which additional cream might be added if desired.

*Tympanites.*—For the relief of tympanites much depended upon whether the gas was within the cavity of the peritoneum or in the intestines. If the former, a fine aspirating needle might be introduced and with immediate relief; if the latter, a long tube might be passed up the bowel and an ounce or more of some warm aromatic solution injected.

The discussion was opened by Dr. A. L. Loomis, who said: The first important point before any surgical procedure should be resorted to was to determine exactly, if possible, the cause of the peritonitis. He was one of those who did not believe in idiopathic peritonitis.

As to the cases in which there was intestinal perforation as a cause, he had yet to see one in which recovery had taken place after intestinal gases had entered the peritoneal cavity. But it was often difficult to determine exactly the point where such an opening into the intestine had been made, or what portion of the intestine was involved. He did not believe that by localizing the usual symptoms of peritonitis the portion of intestine involved could always be determined, because the normal position of the abdominal contents was very likely to be changed by a variety of causes.

If, however, the exact portion of the intestine involved could be determined—that is, the exact starting-point of the peritonitis—he could readily approve of all that had been stated concerning the adoption of surgical procedure in acute peritonitis. In all these cases, when ulceration had taken place and symptoms were slowly developing, there were almost always signs of localized peritonitis, and these were fixed pain, increased by firm pressure, arrest of abdominal respiration, and a feebleness of heart-power which did not correspond to the amount of peritonitis. With such symptoms, and the condition manifesting itself locally in the right iliac fossa, it seemed to him that the surgeon would be justified in cutting down and *preventing* the fatal peritonitis which would develop when a perforation occurred; or, if not to do that, to stand by the patient and be ready, as soon as the first symptoms of perforation did occur, to proceed with the surgical operation and open the peritoneal cavity.

With regard to the opium treatment of peritonitis, he believed in it, but indiscriminate use of opium at first was dangerous, and it should always be guarded by the use of atropine. When the first stage of the peritonitis had passed, and the symptoms had become established and were pursuing their course steadily, then the free use of opium was indicated, and he was not so particular with reference to the combination with atropine.

The discussion was continued by Dr. R. F. Weir, who said that a very grave question arose. Could a surgical operation be resorted to in the condition of collapse? Experience in this direction had not been large. Two important cases had been reported, one by Mikulicz and the other by Kocher, in both of which the abdomen was opened and the patients recovered. In twenty-four cases in which Billroth had made an exploratory incision and closed the wound all of the patients recovered, and Mr. Tait reported that of ninety-four cases of exploratory incision only three terminated fatally. An exceedingly important feature of the exploratory incision was that it enabled us always to say when *not* to do anything.

The President said it might be a question whether in every case of perityphlitis an operation should be performed very early. He believed that all were not fully prepared to operate at once, even though a diagnosis was satisfactorily made, simply because it was well known that in a large number of cases the local inflammation had remained localized. It was also known that recoveries from perityphlitis took place, and recoveries also after the perityphlitis had become general peritonitis.

With regard to the time when the operation should be performed, Dr. Loomis had recommended that it be resorted to when the first signs of perforation occurred. Dr. Jacobi believed that a large number of cases began with perforation. He should propose an operation in every case where peritonitis sets in very suddenly after perityphlitis had been diagnosed.

Dr. Loomis wished to say that the surgeon should be prepared to perform

the operation as soon as the evidence of perforation had appeared. He should beg to differ with the statement that perforation was the beginning of perityphlitis.

Again, the history of repeated attacks was one with which all were familiar, and if the operation were performed at the first attack there was no doubt that the patient would not be exposed to the danger of a second attack, perforation, and sudden death.

Did we not often find several small perforations, and finally a very large one? Did not Dr. Loomis remember cases, seen at autopsies, in which there was a large amount of exudation of lymph, and below it traces of a small perforation; or had he not seen cases in which general peritonitis had followed perityphlitis, and in which the patient lingered on for some time, appearing to get better, and all at once new symptoms of perforation developed, attended with collapse and death? It was to be remarked that the cases differed so much in appearance at the autopsy that the clinical histories must also vary very considerable. The president could not help believing that, in most cases, a small perforation was the first thing which occurred. When the perforation was large, collapse might set in at once, but when it was small it might heal, and the most urgent symptoms might not develop until very much later, if they develop at all.

#### LAPAROTOMY FOR INTESTINAL OBSTRUCTION.

J. GREIG SMITH, F.R.S.E., Surg. to the Bristol Royal Infirmary (*British Med. Jour.*), submits the following rules for guidance in opening the abdomen for relief of *Acute* intestinal obstruction: (1) Make the incision in the middle line below the umbilicus. (2) Fix upon the most dilated or the most congested part of the bowel that lies near the surface, and follow it with the fingers, as a guide to the seat of obstruction. (3) If this fail, insert the hand, and carry it successively to the cæcum, the umbilicus, and the promontory of the sacrum. (4) If this again fail, draw the intestine out of the wound, carefully cover it, until increase of distention or congestion, or both, in one of the coils, gives an indication that the stricture lies near.

(5) If there be considerable distention of the intestines, evacuate their contents by incision, and suture the wound. Never consider an operation for intestinal obstruction inside the abdomen finished, until the bowels are relieved from over-distention. (6) Be expeditious, for such cases suffer seriously from shock. The whole operation ought to be concluded in half an hour.

#### EXCISION OF INTERNAL HEMORRHOIDS.

From the *Weekly Med. Review*:—Dr. E. E. GLOVER read a paper on the above subject before the Indiana State Medical Society: It so happens that no one method of treating hemorrhoids is entirely applicable to every case of the disease. Excision is applicable to but a limited number of cases, and these without exception in cases where the tumors are small, accessible, and not above four in number. In this class of cases the advantages which the operation offers are to be found in its seeming freedom from all danger to life; in the slight constitutional disturbance which it excites; in the very quick recovery which it almost uniformly insures, the patient as a rule being cured in about half the time required by any other method; in its being comparatively painless, owing to the temporary paralysis of the sphincter muscles and the removal of the tumors; in, finally, that the operation is not, as in some other methods, ever followed by stricture.

The objections to this procedure, as stated by its opponents, would seem to be that it requires an anæsthetic, more care and skill than hemorrhoidal operations in general, and that there is danger from hemorrhage.

The operation is performed as follows: The patient's bowels being well emptied he is placed upon a suitable table and thoroughly etherized. With

the fingers or thumbs the anal sphincters are now gently but fully dilated. Van Buren's rectal retractor or Sims' vaginal speculum is then carried into the gut—a depressor may be added if necessary—whereby the seat of the piles is fully exposed. The tumor is then seized with a tenaculum forceps and drawn well down, when the base is embraced with the blades of a Smiths' hemorrhoidal clamp (Mr. Allingham does not use the clamp in his operations, but trusts the vulsellum to hold the stump), just sufficient pressure being made to prevent the instrument slipping and to control in some degree the hemorrhage, without exercising such force as to bruise the parts and thereby cause a slough. In this way any considerable hemorrhage at this stage is impossible. The tumor is now cut off with either the knife or scissors, near the clamp—being careful to leave sufficient stump to prevent its slipping through the blades of the instrument—and all bleeding vessels twisted. If none bleed at the moment, open the blades of the clamp somewhat, when usually one or two vessels will be found to spout. Subject these to immediate torsion. This proving effectual, remove the clamp, and apply small sponges wrung out of hot water to the parts, whereby any oozing is usually readily checked. Treat other piles that may be present in a similar way. When all the hemorrhage has ceased, wet a wad of cotton—to which it is well to previously attach a strong thread—in a solution of tannic acid, one ounce tannin in one ounce of water—and carry it as high into the gut as the seat of the tumor. Finally, give an opiate to prevent too early movement of the bowels.

In the seventy cases of excision reported by Mr. Allingham, no recurrent, hemorrhage occurred, but little pain was experienced, and nearly all of his patients were absolutely well by the sixth day, Mr. Allingham saying that he means by this that the wounds were all soundly healed by that time.

My own limited observation corroborates the larger experience of the British surgeon. I have considered some of my patients as being "absolutely well" on the fifth day; others were out and able to attend to business in three or four days.

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## URINARY AND GENERATIVE ORGANS.

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### SOME POINTS IN THE SURGERY OF THE HYPERTROPHIED PROSTATE.

By JOHN W. S. GOULEY, M.D., Surg. to Bell. Hosp., New York.

From *Gaillard's Med. Jour.*:—The idea that certain medicinal agents, taken by mouth or otherwise, can reduce the enlarged prostate though long since exploded, is from time to time revived on account of the supposed discovery of some infallible remedy. To "cure" prostatic hypertrophy, all the most likely drugs in and out of the pharmacopœa have been exhausted in vain.

A few years ago it was the fashion to inject into the substance of the prostate solutions of ergotin, iodine, and of other irritants. Abscesses and their consequences were often the only rewards of these experiments.

Electricity, applied through the urethra or rectum, has had its day, and has also been found wanting, and often positively harmful.

The principal concomitant affections, complications, and sequelæ which the surgeon is called upon to treat medicinally are dyspepsia, lithuria, costiveness, constipation, sciatica and other neuroses, utlheral fever, cystitis, pyelitis, pyelonephritis, polyuria, oliguria, anuria. The details of medicinal treatment need not here be given.

The surgical treatment of prostatic hypertrophy and its consequences may, with propriety, be divided into two distinct parts. First, that which relates to the mechanical means of relief of obstructed urination and its first consequence, cystitis; second, that which relates to the removal of the obstruction by operation.

1. *Mechanical Means of Relief.*—First let me urge that all rigid catheters be discarded, except in cases of false routes, where Hey's and Mercier's methods are clearly indicated. Even when used with the greatest caution these catheters frequently do much mischief.

Among the flexible instruments now in use may be mentioned the soft vulcanized India rubber catheters, the olivary and curved gum catheters, and the elbowed and double-elbowed catheters of Mercier.

I will make a few quotations from a paper on chronic retention of urine in elderly men, which I read before the Kings County (N. Y.) Medical Society in 1882.

"I am sometimes asked what is the proper catheter, what kind of catheter should be used by those who cannot urinate owing to a urethro-vesical obstruction. My answer is invariably that no one kind of catheter is THE catheter. The same catheter will not suit all cases any more than the same glove will fit all hands." . . . "Let me express my own convictions as to the catheters the use of which should in general be avoided. All metallic and very rigid non-metallic catheters or soft catheters armed with stylets, should not be used under ordinary circumstances. If such instruments had never been employed to relieve retention of urine from prostatic enlargement, cases complicated with false passages, now so common, would be of extreme rarity. I have never owned what is usually called a silver prostatic catheter, nor have I ever seen a case which I could regard as requiring such an instrument. The difficulties which arise from catheterism with metallic or rigid non-metallic instruments are encountered: (1) At or near the bulbomembranous junction of the urethra from an inordinately deep sinus of the bulb, undue force causing the point of the catheter to perforate the mucous membrane and enter the spongy tissue, or to plough its way between the membranous urethra and rectum and sometimes even enter the intestine. This accident makes itself manifest by a more or less copious urethrorrhagia. (2) In the sinus of the prostate. This latter impediment is formed by a urethro-vesical barrier, causing a deep pouch in the prostatic sinus. In this case the same undue force may give rise to a longitudinal rent on one side or the other of the floor of the prostatic sinus, extending to or into the barrier, or else the point of the catheter penetrates and sometimes transfixes the barrier at its center. Such serious injuries are not generally inflicted with soft non-metallic instruments, though when their eyes are improperly constructed they cause considerable irritation and even erosion of the mucous membrane. Therefore, one of the prime requisites of a good catheter is an eye as small as practicable, with perfectly smooth, rounded edges. It should never have two eyes. The size of the catheter is also worthy of consideration. Nearly all those who practice auto catheterism have a predilection for small catheters, such as Nos. 4, 5, 6 English. This is a grave error. The catheter should seldom be under No. 9, which, though it may be pliable, retains a certain degree of firmness and can be much better managed. If it seems too large the surgeon should dilate the urethra. Indeed, it is an excellent practice every few months to put the patient's urethra through a short course of dilation to No. 13 or 14, if a No. 9 is afterward to be used, as this canal will contract from inflammation induced by the five or six daily catheterisms when these have been continued for months or years. In this condition of stenosis the introduction of the small catheter will become more and more difficult, if not impossible, and will cause hemorrhage and other mischief. In cases where false routes have been made I have advised the use of catheters as large as No. 15 English, which the patients are now introducing with the greatest ease, while before they had constantly failed with smaller instruments. Of course, in giving such advice the surgeon must be guided by the normal size of each patient's urethra."

When catheterism is to be intrusted to inexperienced persons, to nurses, or to the patients themselves, the soft vulcanized India rubber instruments are unquestionably the safest, but when they fail it is not wise to leave other catheters in their hands until they have been taught how to use them, and are made aware of the dangers attendant upon careless or rough manipulations.

Evacuatve catheterism cannot be employed too soon in the management of prostatic obstruction. In ordinary cases it is an easy process attended with immediate relief, and can be repeated daily once, twice, or oftener, according to the requirements of the case.

To completely relieve a bladder from a great accumulation of stale, putrid, purulent urine at one sitting and at the same time avert the calamities (cystorrhagia, etc.) mentioned above, I suggested ten years ago the adoption of the following plan:

Let us suppose a case in which the bladder is distended so that its fundus rises above the level of the umbilicus. A catheter is introduced and one pint of urine is slowly drawn off. Immediately half a pint of warm borax solution—two grains to the ounce, with five minims of wintergreen essence and ten minims of glycerine to the ounce—is thrown in, then another pint of urine is allowed to escape through the catheter, and half a pint more of the borax solution is injected. There is already one pint less of fluid in this bladder, and what remains is mixed with a disinfectant. After this, for every half pint of diluted urine drawn off, half a pint of the borax solution is injected until the fluid that escapes from the catheter is perfectly clear. Once every four hours afterward half or a little more of the clearer contents is removed, until the bladder is entirely empty, which may take several days or more than a week.

Since cystitis is almost certain to be developed as a consequence of stagnation of urine, and since it is known by experience that the sudden evacuation of the distended bladder greatly aggravates this existing inflammation, which is not completely relieved by gradual evacuation, but still lingers to cause rapid decomposition of the urine, and later perhaps phosphatic stone, it is absolutely necessary to combat it vigorously and continuously in order to obtain over it some control. An absolute cure of the chronic cystitis accompanying prostatic hypertrophy has not yet been, and will not be, accomplished until it shall be possible to restore the urethro-vesical orifice to its normal state.

Vesical injections are used for the purpose of simply cleansing the bladder, etc. For cleansing, warm water, with the addition of a few drops of essence of wintergreen to deodorize—but any other essence will answer the purpose—is often all that is required; the density of the water to be injected is sometimes increased by dissolving in it a small proportion of chloride of sodium, or chlorate or permanganate of potash. Phenic acid has been largely used in such cases, in solutions of various strength for the purpose of cleansing the bladder, but I fail to see in it any advantage over some of the other alcohols. When the urine is highly alkaline, the cleansing fluid may be mildly acidulated with nitric, hydrochloric, or phosphoric acid. When the urine is purulent and slimy the biborate of soda or boracic acid, two grains to the ounce of warm water, seldom fails to be beneficial. After a few weeks' use of the former I have sometimes substituted the latter.

Such irrigations may be used once, or, at the most, twice daily, and not more than half a pint at each sitting, throwing in two or three ounces at a time. Much good may be expected by the prudent use of irrigations. They are, not unfrequently, used to excess, and this abuse of such an excellent remedy only results in disaster, especially when the fluid employed is of low density. In that case the mucous membrane becomes water-logged, its epithelium is destroyed and the cystitis is rendered utterly unmanageable.

As a modifier of the vesical mucous membrane nitrate of silver occupies the first rank; only, however, when the urine is of acid reaction. When the urine is persistently alkaline, this salt, even in very weak solution, is not tolerated, and should not be used. In certain cases of inordinate sensitiveness of the prostatic urethra and urethro-vesical orifice, the injection of an ounce or two of nitrate of silver solution, one grain to the ounce, is of great service, and its repetition once every third or fourth day for a couple of weeks renders catheterism much easier to the surgeon, and almost painless to the patient. In some other cases I have begun with very weak solutions (one-tenth of a grain to the ounce), and gradually increased the strength to two grains, seldom more, to the ounce. In these cases I have thrown into the

bladder four ounces of the solution, making one such injection at each sitting.

I take this occasion to protest once more against the practice of filling the bladder with nitrate of silver solutions of twenty to thirty grains to the ounce, because this practice is still resorted to, though, I am glad to say, very exceptionally. From careful analysis of a number of cases in which this salt had been used in strong solutions, I am convinced that it should never, under any circumstances, be so employed in the treatment of cystitis.

To render catheterism less painful in cases of great irritability of the urethra and bladder, solutions of sundry substances are thereinto injected, or introduced into the rectum, such as morphia, atrophia, hyoscainum, and more recently cocaine hydrochlorate. I have employed it in one case with some advantage.

### DIGITAL EXPLORATION IN THE DIAGNOSIS OF TUMORS OF THE BLADDER.

By REGINALD HARRISON, F.R.C.S., Surg. to the Liverpool Royal Infirmary and Lecturer on Clinical Surgery in the Victoria University.

From the *Medical Record*.—It will be convenient to arrange tumors of the bladder into two classes or stages: (1) Those which, during their entire existence, or for a portion of it, occasion either slight or no distinct indications of their presence; and (2) those which declare themselves by symptoms either seriously disturbing the function of micturition, or which by their constancy or degree threaten the life of the patient.

Although the diagnosis may be correct, the prognosis, so far as operative treatment is concerned, may fall very short of our desire, as the propriety of attempting to remove such growths can never be foretold until the finger has been placed in contact with them.

Digital exploration of the bladder relative to the treatment of tumors seems to me to be called for when it can fulfil at least three objects: (1) The relief of symptoms which are otherwise irremediable; (2) for verifying the diagnosis of tumor; (3) for determining whether the removal of the growth can be proceeded with. The circumstances which require a surgeon to open the bladder for the purpose of finding out what is inside it must be very exceptional; but when by this proceeding the three important objects I have mentioned are to be obtained with little risk, then its importance cannot well be overated. There are recorded cases which seem to suggest that if the exploratory examination had been limited to providing a means for draining the bladder, and for examining the growth, it would have been better.

And now a few words in reference to the operation for exploring the bladder with the finger. If there are two ways to a place of about the same length but with somewhat different surroundings, you may depend upon it you will have two sets of travellers, with the same aims, but with very opposite notions as to the respective merits of the two routes. So with the bladder; though we are agreed as to the necessity of exploring it, we are not so unanimous about the route. In this country, as well as in America, median perineal urethrotomy seems to be preferred, whilst in France the claims of the supra-public operation have been forcibly urged by Professor Guyon, Peussou, and others. Sir Henry Thompson has advocated the former method, not only as being the safest and most convenient for exploration, but, as he has shown by examples, for extirpating these growths. It seems to me that this form of procedure is to be preferred on several grounds.

In the first place, it provides a direct access to the more usual position of these growths; by a continuance of the incision forward into the membranous urethra and backward to the extreme limit of the prostate, it affords more room for manipulation than at first sight appears; but what is of more importance, it is, I believe, the best position for the drainage to follow, and which is a most important item in the management of these cases. If a

perineal exploration shows the position or character of the tumor to be such as would be benefited by an access from the front, should it be determined to remove it, there is nothing to prevent the addition of the supra-public incision, as Billroth demonstrated. A suprapubic incision is none the worse for having a more dependent opening, as Frère Côme practised a hundred years ago in connection with his success as an operator for stone. But, as I have already intimated, the great importance of the after-treatment, in relation to thorough drainage, renders, to my mind, the perineal procedure almost a necessity.

The feasibility of attempting to remove the tumor having been determined by digital exploration, this should be effected as completely as possible; to take away a portion of it is to leave the remainder to inflame, suppurate, and possibly to become gangrenous, thus providing a fruitful cause for pyelitis, through the largely dilated ureters.

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### STRAPPING THE TESTICLE.

From the *Proceedings of the N. Y. Surg. Soc.*:—Dr. A. C. Post mentioned a case with reference to some details in the mode of procedure. It was one of gonorrhoeal epididymitis in which, in the subacute stage, he resorted to strapping the testicle. In isolating the cord for this purpose there is often difficulty in preventing the adhesive plaster from cutting the skin. Lint is usually interposed, and sometimes there is difficulty in keeping it in position. To obviate these difficulties Dr. Post adopted the following plan; after having the scrotum shaved and the opposite testicle drawn out of the way, he passed a roller bandage, about fifteen to twenty millimetres in width and half a metre in length, around the cord and over the upper part of the testicle, and then used a strip of India-rubber adhesive plaster about twelve to fifteen millimetres in width and half to three-quarters of a metre in length, passing it spirally over the testicle until he reached nearly the lower extremity of the organ and then applied the radiated straps in the ordinary way.

The peculiarity of the method consisted chiefly in using one long strip of plaster instead of several short ones, and it facilitated the operation very much and accomplished the object in a much more satisfactory way.

The president, Dr. R. F. Weir, raised the question concerning the advantage of strapping the testicle at all. His experience was against its usefulness, and had been such as to lead him to abandon it altogether.

Dr. Post said his experience had been entirely the reverse of that of the president. He did not strap the testicle in the acute stage, but when there was a disposition to chronicity he had invariably found that the pain was promptly relieved and the swelling rapidly subsided when the pressure was made in the proper manner and at the proper time.

Dr. Briddon did not favor strapping of the swelled testicle, and had had much better results by the use of a very thin elastic bandage.

The president remarked that the narrow bandage was used in the New York Hospital twenty years ago, the plan of treatment being identical with that mentioned by Dr. Post, except the use of rubber plaster. His impression had been that the swelling would go away nearly as quick without it as with it, and more painlessly.

Dr. Gerster thought the president's remark entirely correct—that is, that in most of these cases treatment by strapping is unnecessary. He believed that indiscriminate strapping or elastic compression is unnecessary, and therefore harmful. There were, however, some cases in which the infiltration remained stationary, sometimes eight, ten, or twelve weeks elapsing without improvement, and which did not yield so readily to any other method as to compression of the organ.

There is one complication which may arise from strapping the testicle, namely, a disagreeable eczema of the scrotum, which is more difficult to cure than the infiltration for the removal of which it has been applied.

## SYPHILITIC AFFECTIONS.

## OBSERVATIONS ON PHTHISIS AND PNEUMONIA IN THEIR RELATION TO SYPHILIS.—A STUDY OF ONE HUNDRED CASES IN WHICH THESE AFFECTIONS WERE ASSOCIATED.

By WILLIAM H. PORTER, M.D., Prof. of Clin. Med. and Pathology in the N. Y. Post-Graduate Med. School and Hosp.; Curator of the Presbyterian Hosp., etc.

From a paper based on the study of one hundred cases in which these affections were associated, (*N. Y. Med. Jour.*):—Of the one hundred patients, fifty-two were males and forty-eight females; but, while these figures are true of this particular one hundred, they do not give the relative frequency among patients at large, for, when the whole number treated was taken into consideration, it was found to be more frequent in females.

The youngest recorded was sixteen years, the oldest sixty-six.

The question of the disease being an acquired or an inherited vice is one of unquestionable importance. A careful study of this point, for a number of years, has led the writer to believe that pulmonary syphilis in adults is a very common disease, and that it is due to either an acquired or inherited taint, the latter being nearly, if not quite, as frequent as the former.

The diagnosis is based upon five principal signs and symptoms: (1) The abundant expectoration without any signs of softening of the pulmonary tissue. (2) The weak and debilitated condition without marked emaciation and the good rational history of phthisis. (3) Pronounced dyspnoea without any evidence of a cardiac or pulmonary obstruction to the circulation. (4) The peculiar pain and the reaction to pressure upon the sternum and tibial crests. (5) The ready response to treatment is another element in the diagnosis.

The prognosis depends upon the early recognition and treatment. Syphilitic phthisis may run a very rapid course, but, as a rule, it is quite chronic. Dissipation hastens its progress, especially when alcoholic stimulants are used to excess.

The conclusions may be summed up as follows:

1. *Ætiology.*—Pulmonary lesions attributable to syphilis are very common, more so in females than in males, with the maximum number of cases occurring between thirty and forty years of age; it is as frequently, if not more frequently, inherited than acquired.

2. *Pathology.*—Is most frequent at the apex; usually involves both lungs; is a peculiar pneumonic process in the early stages, while later cavities are formed, and it becomes phthisical in the sense of progressive consolidation, followed by softening and the formation of cavities. There is a strong resemblance, but a positive difference, between syphilitic and tubercular phthisis, and a positive anatomical difference between a syphilitic and a miliary tubercle.

3. *Symptoms.*—These are peculiar and diagnostic.

4. *Diagnosis.*—This rests mainly upon the rational history and physical signs, the extreme dyspnoea, the periosteal tenderness, and the absence of an increased bodily temperature.

5. *Prognosis.*—This depends upon an early recognition of the trouble.

6. *Treatment.*—It must be anti-syphilitic to be of any avail. Many cases are unaffected by iodide of potassium alone, unless under enormous doses, but a rapid improvement follows upon the use of the biniodide of mercury, iodide of ammonium, and the iodide of potassium.

## SYPHILIS.

By F. R. STURGIS, M.D., Prof. of the Diseases of the Genito-Urinary Organs and of Venereal Diseases in the N. Y. Post-Graduate Med. School and Hosp., etc.

From the *N. Y. Med. Jour.*, Aug. 1, 1885.—The treatment of this affection is largely in the expectant plan. Relapses often occur, but, if treatment is



immediately resumed, they become milder and milder until they cease entirely and the patient may be pronounced cured; but whether the disease is entirely eradicated the future only can decide.

This is not very satisfactory, it is true, but, in the present state of our knowledge, nothing more definite can be stated. If, however, I were to be asked whether the condition was curable, I should reply in the affirmative.

The iodide of potassium should be given, owing to its prompt action, whenever there is ulceration about the mouth, nose, throat, or parts of the body where there is danger of any disfigurement; but we should not depend entirely upon this drug to effect the cure, as it is not so positive or so well borne as the mercury.

The treatment in skin lesions must be continued until not only the eruption but the staining has entirely disappeared, leaving only the scar, which is indelible, and is one of the few results of this disease that can not be removed.

The initial lesion sometimes leaves a scar, and atrophy, with a depression and whitish scar, often occurs after gummosis infiltrations, whether in the bone or elsewhere. Some cases do not tolerate either mercury or the iodide, and this is notably true of those cases which are phagedenic from the beginning. Sometimes it is best, owing to the constitutional debility from excesses of various kinds with which these patients suffer, to institute a tonic and hygienic treatment before having recourse to the mercury or the iodide. The iodide of iron is especially useful in these cases, although the citrate and potassium-tartrate are well borne. Cod-liver oil may also be administered.

Some patients may recover without the use of mercury, but it is not safe to omit its administration, for we can never tell how the disease will end.

The affections of the bones and the nervous system are pathologically the same as the initial lesion, but the one tends to resolution while the others do not. When nodes become soft resist the temptation to put in the knife, for, while it is good for an abscess to be opened, it is bad for a gumma, as it admits the air to the bone and necrosis ensues, for which operation is hopeless, as no proper sequestrum is formed. In the affections of the nervous system the remedy should be given promptly and with a free hand. The most unpromising cases get well when properly treated, but the iodide must be given in doses which seem appalling when compared with those beyond which we were warned never to go when we first began to use this drug. One ounce per diem, in divided doses, has to be given frequently. Bumstead reports the case of a patient who took his iodide *ad lib.* He became, in fact, an iodide eater. The rule may be relied upon that no toxic results will occur until the symptoms yield. The remedy should therefore be carried to that point and then dropped. Symptoms that laugh at fifty will yield to one hundred grains, and the necessity for one hundred and fifty or one hundred and eighty grains need cause no alarm. Many physicians will refer to fifteen grains as a large dose, and look incredulous when a dose of fifty or one hundred is mentioned. All practitioners should be prepared for the treatment of syphilis, for it often plays a not unimportant part where not expected, and is an important factor in the diseases of children. In every department of medicine we must be ready to meet it and to expect a cure.

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#### WHEN IS THE PROPER TIME TO INSTITUTE SPECIFIC TREATMENT IN SYPHILIS.

By A. H. OSMANN-DUMBSNIL, M.D., Prof. of Skin Diseases and Syphilis in the St. Louis College of Physicians and Surgeons.

From the *St. Louis Med. and Surg. Jour.*—The proper time to begin the constitutional treatment of syphilis, is when the so-called secondary symptoms make their appearance. This is not only more rational, but it is safer, more thorough and it is the only method by which the patient is given the full benefit of any doubt that may exist.

All are doubtless aware of the fact that the chancre or initial sclerosis is that sign which first appears to show that syphilis has invaded the economy. We will not discuss here the question as to whether it is a local manifestation purely, or a symptom of general infection. The numerous experiments made to entirely destroy this lesion by cauterization, excision, etc., have failed to avert further manifestations and we feel justified in regarding it as a local symptom of a general infection. Now, if this lesion possesses all of the characteristics of the typical chancre of syphilis, there is but little difficulty in recognizing it. If, on the contrary, it exists in an unusual locality or has developed in an abnormal form it will not be so readily recognized.

Whether the diagnosis be positive or doubtful the treatment remains the same. If the chancre be non-infecting and has been diagnosed as infecting, simple detergent measures and internal tonic treatment will not have any tendency to retard cure. On the contrary, you are placing your patient under the best possible conditions to ensure rapid granulation and cicatrization of the ulcer. Should it, however, be an infecting chancre, whether recognized as such *ab initio* or not, the same treatment will be proper. The chancre will heal spontaneously in any case and detergent measures are our mainstay now in surgical procedures and always in order. The simple tonic treatment has the effect of counteracting the anæmia and debility which always accompany syphilis and besides places the patient in the best possible condition for the seige he is about to undergo. Then when the secondary lesions appear, the specific tonic treatment, the mercurial, is in order and should be pushed vigorously.

The question will be asked, "Why not give mercurials immediately and avert the appearance of the secondary symptoms? Or why not give it in doubtful cases?" To the first we will answer that there are several reasons. In the first place mercurials given immediately after the appearance of the chancre do not prevent the appearance of secondary symptoms, they merely delay them, even should the patient faithfully take his medicine. In the second place the patient will take the remedies ordered, but for a short time, as he will regard himself cured, never having observed anything beyond the primary sclerosis. He will later on, after a greater or less interval of time, have relapses which will often be difficult to control. In doubtful cases you place a patient under treatment who perhaps never had syphilis. If, as is advocated in this paper, you wait until the appearance of secondary symptoms and the patient observes them, he will be impressed with the importance of the disease with which he is afflicted. Again, if no secondary symptoms appear within a certain limited time the patient can be assured that his disease was purely local.

Is there not time lost in delaying specific treatment until the appearance of the secondary symptoms? By no means. The patient, properly instructed will discover the first erythematous blush or roseola and will be quick to see that it is properly cared for; this will rapidly disappear under appropriate treatment and he will in the interim have gained strength and greater power to resist not only the effects of the disease, but any untoward effects the medicines might exert. Besides this, a certainty of the existence of the disease is established.

#### THE LOCAL ACTION OF MERCURY IN SYPHILIS.

From the *Cincinnati Lancet and Clinic*, Aug. 22, 1885.—It is generally admitted that mercury acts upon organs affected with specific lesions only through the medium of the blood, and hence, in the treatment of syphilis, our chief endeavor is to place the system at large under the influence of the remedy, local applications of the same being regarded merely as accessories. In opposition to this view, Professor Köbner, of Berlin, has published facts which go to prove the topical action of mercury upon syphilitic tissues, and has drawn therefrom some valuable therapeutical indications. Local treatment, he thinks, will often be successful in the removal of large scleroses—such as show themselves refractory to constitutional medication in all its

forms. He lays special stress on the superior advantages to be gained in the treatment of indurated chancre by employing lotions and subcutaneous injections of formamide of mercury (1:100). The same measures are recommended for secondary and tertiary ulcers, and for flat condylomata.

It has recently been shown to Zeissi that papulous ulcers, as well as indurated glandular swellings, are very refractory to subcutaneous injections of sublimate, but are readily absorbed when the injections are made in their vicinity. Again, in the employment of mercurial frictions, if these be carried out upon the feet of a patient affected with a general papular roseola, the eruption will disappear from the limbs eight or ten days before it leaves the body; and the same difference will be observed between the anterior and posterior surfaces of the latter, if the ointment be applied only on the back. On the other hand, it has been found that if, in syphilitic adenitis, the inflamed gland itself be subjected to this process, resolution will follow much sooner than if the constitutional effects of mercury be produced by either friction or injections practised upon distant parts. Köbner emphasizes the utility of applying mercurial preparations to different regions of the body, as adjuvants to the internal treatment. Köbner has known large cervical swellings, following in the train of labial chancre, to disappear under the local use of a little gray ointment after constitutional treatment had been tried in vain. Nevertheless, even these measures will be unavailing when the swellings are partially due to scrofula, when their existence has antedated the syphilitic infection, or when they are kept up by persistent irritation of their lymphatics—in which last case it will be necessary to find out and remove the cause. Obstinate cervical engorgements are sometimes produced by ulceration of the nasal fossæ.

To sum up, then, the mercurial treatment of syphilis should be both local and constitutional. The former is sometimes sufficient by itself, or is the more rapidly efficacious; and, in every case, the remaining traces of the disease will call for local applications, repeated at proper intervals, until they are as far as possible removed.

Köbner has experimented with Oertel's mercurial soap, with oleate of the oxide of mercury, mercurial plaster, and local subcutaneous injections; they are all irritating to the skin, and are inferior in efficacy to freshly prepared gray ointment.—L. BECO, *Ann. d. l. Soc. Medico-Chirurg. de Liege*.

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## AFFECTIONS OF THE EYE.

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### PNEUMOPHTHALMOS, OR AIR IN THE VITREOUS HUMOR.

By W. F. MITTENDORF, M.D., Surg. to the N. Y. Eye and Ear Infirmary, Etc.

Entrance of air in the vitreous chamber is of such a rare occurrence, that, no description of it has been given. Dr. Mittendorf reported two cases. The first case was that of a young blacksmith, who was wounded by a piece of iron penetrating the sclera and lodging in the vitreous humor. After a few hours it was found that the foreign body, surrounded by a clot of blood, had settled at the bottom of the eye, the vitreous had cleared up, and behind the lens, and a little above it, three air-bubbles were seen by means of the ophthalmoscope, one of these appeared to be the size of a small pea, the two smaller ones were about as large as a grape-seed. They resembled the air-bubbles as seen under the microscope, their centre being bright, and the outline so well defined and surrounded by a sharp black border, that their recognition was not difficult.

The foreign body could not be removed by means of the magnet, and it was decided to let it remain. Forty-eight hours after the accident every trace of the air-bubbles had disappeared.

The second case was the result of a drilling accident, and represented in outline the same characteristics.

In order to determine the exact appearance of air in the vitreous humor, Dr. Mittendorf experimented upon rabbits' eyes. Four had air introduced into the vitreous humor by means of a hypodermic syringe, while four were subjected to introduction of oil by the same means. Nearly all these experiments were successful. The difference between the air-bubbles and oil-globules was marked. The oil-globules were highly refractive, the contour decidedly darker than the air-bubbles, which were colorless. Dr. Mittendorf's conclusions were:—(1) The entrance of air into the vitreous body can occur only after a part of the contents of the vitreous chamber has escaped. (2) It is favored by the entrance of a foreign body which makes a large, irregular, and gaping wound in the sclera. (3) In order to allow air to enter the vitreous humor, this must either be quite fluid, or its anatomical arrangement must have been disturbed by the entrance of a foreign body, or the air must have been attached to the foreign body, and thus carried with it into the eye. (4) The air in the vitreous humor appears like an air-bubble as seen under the microscope; it is more or less round, highly refractive in the centre, and has a sharply defined black outline. (5) Oil-globules in the vitreous present a similar appearance, but they look heavier, and are not perfectly colorless, and their outlines are darker; they are also more glistening in the centre. (6) Air-bubbles will be completely absorbed within two or three days; their presence is not a source of great danger to the eye. Oil-globules last longer, but their presence is likewise non-irritating.

#### THE EFFECT OF COCAINE ON THE HEALING OF WOUNDS.

By LUCIEN HOWE, M.D., of Buffalo.

In a paper published in the *N. Y. Med. Jour.*, Aug. 8, 1885, he says:—I have endeavored to determine its influence upon the healing of wounds by producing equal lesions in both eyes of an animal, and then comparing the one treated with cocaine with the other, either left to itself or treated with atropine. The principal objects of this inquiry were to detect any unfavorable influence cocaine might exert upon such wounds by reason of the irritation produced, or of the effect upon the nerve supply. On the contrary, if its action was advantageous, it was important to determine what parts of the eye it affected, and if for the iris or any other portion it was as reliable as atropine. The conclusions may be briefly stated as follows:

1. In lesions of the conjunctiva, perfect solutions of the hydrochlorate of cocaine have no appreciable effect, beneficial or otherwise, upon the healing process. When the solution is imperfect, a slight additional hyperæmia is produced, which persists longer than in the other eye, but this is of no practical importance.

2. In lesions of the cornea it has a beneficial effect, like other mydriatics, but inferior to that of atropine. In imperfect solutions a perceptible abrasion of the epithelium is produced, and, though this is quickly renewed, the healing is thereby delayed by the cocaine.

3. In wounds of the iris the mydriatic action of cocaine is evident; but here again it is inferior to atropine, and is of little value in detaching firm synechiæ. Imperfect solutions, however, do not appear to hinder the healing process any more than when applied to the conjunctiva or cornea. Indeed, as strong mixtures possess decided antiseptic properties, they would seem to exert a favorable effect in this respect.

#### GLAUCOMA, THE RESULT OF INJUDICIOUS USE OF ATROPIA.

By J. M. HULL, M.D., Special Prof. of Diseases of Eye and Throat in the Med. Coll. of Georgia.

From the *Atlanta Med. and Surg. Jour.*, August, 1885:—There is probably no drug in our entire pharmacopœia so invaluable to the oculist as sulphate of atropia, and none more capable of doing irreparable damage when injudiciously used.

When its mydriatic effects are desired, this should be accomplished within twenty-four or thirty-six hours by the use of a sufficiently strong solution (16 grs. to  $\frac{3}{4}$  i; if necessary, repeated every five minutes for three times), and not by the use of weaker solutions used three times per diem through several weeks.

Nothing is to be feared from its use in this way, for if its tonic effects present themselves, they can readily be relieved by a hypodermic injection of morphia sulph., repeated if required.

It has been recognized for years that latent glaucoma may be awakened into an active attack by the instillation into the eye of a solution of atropia, and the recitation of the following case will, I think, establish the fact that glaucoma may be produced in a healthy eye by its injudicious use for a long time.

In October last a gentleman presented himself for treatment with the following history: In May of the same year he was struck with a piece of wood over the right cheek and brow. Owing to the brow being prominent, the eye, he says, was not at all injured. On the following day the brow, lids and cheek were black and slightly swollen. As, on the second day, the bruise looked more serious, his wife became alarmed and insisted that he should consult a physician. In order to quiet her apprehensions, he did so, and stated that the eye had not participated at all in the injury, being perfectly clear, giving no pain, and vision unimpaired.

The physician gave him a solution of atropia sulph., grs.  $\frac{1}{2}$  to  $\frac{3}{4}$  i, and ordered that two or three drops be put into the eye three times a day. Maximum dilatation was produced within thirty minutes after the first instillation, with all the inconvenience consequent upon paralysis of accommodation.

Upon calling on the physician the next day, he was told to bandage the eye, continue treatment, and report in a week. This he did, and despite the fact that the effects of the bruise had entirely disappeared, and there existed no signs of inflammation, he was instructed to continue the drops. This being kept up six weeks, the man noticed that, in addition to his sight having become much worse, the eye seemed to have become larger, and was perfectly hard. He presented himself to the physician, who then recognized what he had accomplished, and endeavored to rectify the damage by instillations of eserine. His efforts were, of course, attended with no success.

A careful examination elicited the following: The right (injured) eye had fixed pupil, glazed appearance, cloudy aqueous, sensibility of cornea diminished, and globe distended and hard, vision diminished to light perception. The ophthalmoscope revealed a cupped and white nerve. Vision of other eye good.

### TUMORS OF THE ORBIT.

By J. W. THOMPSON, M.D., St. Paul, Minn.

From the *Northwestern Lancet*:—Tumors of the orbit are various in character and somewhat frequent in occurrence. About all the varieties have been found in this cavity.

The tendency of all tumors within the orbit is to press forward and displace the globe, causing the eye-lids to bulge. The parallelism of the axis of vision is usually disturbed in a greater or less degree. In the majority of instances diplopia, or double vision, is the first symptom of which the patient will complain. It is a very remarkable fact, however, that a small tumor will many times cause diplopia, while at other times a large tumor will not disturb monocular vision, though the displacement of the globe in the latter instance is very much greater than in the former. This is a peculiar phenomenon and not always susceptible of an explanation. Sometimes the eye will appear to be myopic; a minus spherical, however, will readily prove or disprove this. The pressure of a tumor upon the globe, may produce astigmatism by disturbing curvatures of the cornea in some direction. The pressure may be in such a direction as to shorten the antero-

posterior axis of the globe, and thus give rise to hypermetropia. The globe from pressure may be completely destroyed, either directly by bursting, or by atrophy. It may be pressed so far between the lids as to allow the cornea to be constantly exposed to the irritating influences of the atmosphere and dust, which will soon cause this structure to become hazy, or even to slough if the pressure should sufficiently disturb its nutrition. The lids may be carried away from the globe so as to displace the puncta lachrymalis, and allow the tears to run over on the cheek. There may be pressure on the ophthalmic vein, producing great œdema of the lids, and congestion of the eye-ball. Vision may be disturbed or destroyed by pressure on the optic nerve. The lachrymal gland may become atrophied. The motor nerves may be injured, and the recti muscles thus paralyzed. The whole of the orbit may be expanded to such a degree as to deform the forehead, the nose or the entire upper part of the face. The walls of the orbit may be absorbed. Should the roof of the orbit become thus involved, death may ensue from interference directly with the brain. The prognosis and treatment will be determined by the character of the tumor, whether malignant or benign. The growth of a benign tumor is as a rule very slow and unattended with pain, excepting what may be produced by its pressure upon the surrounding parts. The pain thus produced at the commencement of an adventitious growth in the orbit may be excessive at first, and become very mild and scarcely noticeable after the growth has increased very much in size. This is the rule, and the reverse the exception. The rational explanation of this, however, may be sought in the circumstances that constant pressure upon a part diminishes its vitality and produces atrophy, while intermittent pressure will act as an irritant and increase the vitality, thus giving rise to hypertrophy.

Cystic tumors are more frequently found in the orbit than any other variety. Of benign tumors, the fatty variety in point of frequency comes next in order. The fibrous tumor is occasionally found in the orbit. This tumor, when unattended with pressure, has a tendency to assume an oval shape, which is not changed except by a very firm resistance, and when it occurs in the orbit posterior to the equator of the globe, it will maintain its oval shape and press the globe out of the orbit.

The usual location of a tumor in the orbit is between the recti muscles and the orbital walls. A benign tumor is seldom found between the muscles and the globe. The early removal of a tumor from the orbit is always desirable. To procrastinate, is to jeopardize valuable vision. In its removal the shortest road to it is as a rule the best.

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## AFFECTIONS OF THE EAR.

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### THE DIAGNOSTIC VALUE OF THE TUNING FORK IN DISEASES OF THE EAR.

By T. F. C. VAN ALLEN, M.D., Albany, N. Y.

From the *Albany Medical Annals*.:—The tuning fork and the variance of bone conduction were discussed in 1846, but it was nearly twenty years later when Weber called attention to the fact that a vibrating tuning fork held against the vertex would be heard better in the ear, the meatus of which was stopped by the finger.

Politzer, in 1868, called the attention of the profession to the value of the instrument, and soon the following deductions represented the diagnostic value of the tuning fork.

The ærial conduction of vibrations in the normal ear is more prolonged than bone conduction.

Stopping the meatus of the ear decreased the duration of ærial conduction in this ear, while bone conduction was intensified, though the duration was almost unchanged.

Any thing interfering with the action of the conducting mechanism of the middle ear, or obstructing the outward reflection of vibrations, decreased the length of aërial conduction, and increased both the intensity and proportion of bone conduction—as impacted cerumen and the different forms of middle-ear catarrh.

There being no objective symptoms of such obstruction, aërial conduction diminished, and bone conduction diminished, or its proportion not increased, the disorder is with the auditory nerve.

This is rather crudely stated, but is sufficient for our purpose.

Let a patient be imaged before us. A vibrating fork is placed against his upper incisors, and he is asked on which side it is heard the more loudly. He replies, "On the left." Now either of two conditions might be diagnosed—that the outward reflection of the vibrations is interfered with by middle-ear trouble; that the external auditory canal is obstructed, or there is decreased bone conduction in the right or opposite ear, due to nerve disorder. Disease of the nervous apparatus is not a common occurrence, and the patient has probably given assurance that only the left ear troubles him, the truth of which can be proven by testing his aërial conduction. So it is safe to infer that there is some obstruction in the middle ear or the external auditory canal. Thus the fork has made a ready partial diagnosis.

Our imaginary clinic must have two more cases, at least, and the next one is extremely deaf; a loud voice must be used to have him hear, and both ears are apparently equally defective. Is this a case of partial nervous deafness, or is it one of middle-ear disease? Again, is it due to both, and is each ear similarly affected? The tuning fork will answer these questions, with a few exceptions, in a very satisfactory manner. Using the tuning fork as before, it is discovered whether it is heard well by bone conduction, the duration and intensity of this conduction, and any difference between the ears as regards these points. We can compare the length of duration with our own bone conduction, and thus make a fair estimate. If the bone conduction is normal, or not much decreased, labyrinthine trouble may be excluded; there is a chance of making an error, for "intermittent bone conduction" does, rarely, exist to a marked degree. Too much stress should not be placed on a slight diminution of bone conduction when the objective symptoms of catarrhal otitis media are present, or, at least, not before thorough inflation has been resorted to.

The third patient will be one whom all, who attempted to converse with, would pronounce absolutely deaf. Possibly he may have been in this condition since childhood, when he had the scarlet fever, and at the entrance of manhood his friends are anxious to know if he has any hearing power left, and if anything can be done for him. The tuning fork, or some other means of testing bone conduction, is the only means of testing such a patient. Inability to hear a loud voice does not necessarily mean absolutely inactive auditory nerves. The tuning fork is tried, not only on the incisors, but on various teeth and different portions of the cranium. The pitch is altered, and different tones and semi-tones are to be tried, to discover if there is any bone conduction remaining. Care must be used not to mistake the sensation of feeling vibrations for hearing vibrations; for an absolutely deaf person will feel the vibrations of the fork, the same as he will feel the closing of a door. The distinction is often a rather difficult one to make, and the success depends considerably upon the intelligence of the patient. If it be found that the patient cannot hear the fork, no matter what its pitch or position, and inflation has no effect, we are safe in inferring that the nervous apparatus is temporarily or permanently useless.

There is an annoying condition that quite frequently presents itself, and which interferes greatly with the tuning-fork test. It has received no special name and but slight attention, so far as I am aware. It may be illustrated thus: Some time ago—years perhaps—a patient had more or less trouble with his right ear, and lost much of the hearing power of this ear. He does not come to the physician for this old disorder, but he is alarmed by an impairment of the hearing of the left ear, which is a recent occurrence. It is wished to test the bone conduction of the left ear, but on applying the

vibrating tuning fork he assures us he only hears it on the right side. If no questions had been previously asked, and the physician knew nothing of the history of the case, he might be disposed, if the patient seemed intelligent, to conclude that there was labyrinthine disorder of the left ear. When the ærial conduction is tested with a watch, it is found that he cannot hear it at all on the right side, but hears it at quite a distance on the left side. Thus these tests seem to contradict themselves. The explanation is this: The right ear was affected by some middle-ear disease, and the ærial conduction much reduced by the obstruction to the inward transmission of vibration, while bone conduction, by this same obstruction, was rendered abnormally intense. The disorder of the left, or recently affected ear, has probably increased both the proportion and intensity of bone conduction on the left side, but the disease has not produced as great obstruction as exists upon the right side. He therefore hears the vibrations upon the right side alone, because on this side the bone conduction is of much greater intensity than the bone conduction on the left side, which he altogether ignores.

### THE RELATION BETWEEN CHRONIC OTITIS MEDIA CATARRHALIS AND CHRONIC RHINITIS.

By CHARLES H. BURNETT, M.D., of Philadelphia.

From a paper published in the *Medical News*:

*Conclusions.*—1. That there is a constant causal relation between chronic nasal and chronic tympanic catarrh, in which throat and faucial diseases play only a subordinate part, and this naso-aural catarrh is found under two chief forms, viz., the hypertrophic and the atrophic.

2. It follows that, owing to this close connection between the nose and the middle ear, that treatment of chronic catarrh of the middle ear, to be efficient, must be coupled with that of the coexistent and causal rhinitis, and that treatment of the throat alone is of little avail in chronic aural diseases. Treatment of, and by the way of, the external ear is of course useless. It is also shown that tinnitus aurium from catarrhal causes is best overcome by treating the chronic rhinitis.

3. Since the appearances of the membrana tympani are so variable in the hypertrophic form, nothing can be predicated of the tympanic disease by simple inspection of the membrana. In the atrophic form of chronic aural catarrh, the appearances of the membrana being more consistent and invariable, the surgeon can predicate more of the tympanic disease from inspection of the membrane, viz., that it is sclerotic in form. From this variability in the appearances of the membrana in the hypertrophic form of aural catarrh, it follows that lesions of the membrana taken alone, are of little moment respecting the hearing. The lesions most competent to induce acoustic disturbances are apt to be situated upon the ossicula or upon the inner tympanic wall near the fenestræ.

4. It behooves the aural surgeon, therefore, to inspect and treat the non-surgical forms of nasal catarrh as they occur in chronic catarrh of the middle ear, laying more stress on the condition of the nares than upon the fauces, so far as any causal relations between these parts and the deafness are concerned.

### AFFECTIONS OF THE SKIN.

#### THE PATHOGENESIS OF CERTAIN AFFECTIONS OF THE SKIN.

By GEORGE H. TILDEN, M.D., of Boston.

From the *Boston Med. and Surg. Jour.*:—It is well known that the introduction of various drugs into the stomach is sometimes followed by the appearance of a cutaneous eruption, and that the connection between them is one of cause and effect.



Other forms of cutaneous lesions may be caused by many different drugs, and present a variety of forms, the most common and well-recognized of which are as follows:—

(1) Simple and evanescent erythematous patches, unattended by constitutional disturbance, and not apt to be followed by desquamation, which have been observed after the use of quinine, antipyrine, copaiba, iodide and bromide of potassium, cubebs, and benzoate of soda.

(2) Papular erythematous lesions, attended with exudation into the cutaneous tissues, and resembling in some cases measles, in others the various forms of erythema multiforme, have been produced by the ingestion of quinine, antipyrine, copaiba, and iodide of potassium.

(3) A diffuse form of erythematous dermatitis, not unfrequently accompanied by constitutional derangement, generally followed by desquamation, and often closely simulating the rash of scarlet fever, has occurred in consequence of the administration of salicylic acid, quinine, opium, morphia, and iodide of potassium.

(4) An urticarial eruption, consisting of wheals, is the most common of the medicinal eruptions, is apt to be combined with other forms and attended with constitutional disturbance, and has been described as following the use of copaiba, quinine, salicylic acid, antipyrine, iodide and bromide of potassium, opium, morphia, chloral hydrate, and arsenic.

(5) Purpuric eruptions, or circumscribed exudation of blood into the dermal tissues, sometimes accompanied by hæmorrhage from the mucous membranes, are reported as having occurred from the use of quinine, salicylic acid, iodide of potassium, and chloral hydrate.

Much less common than the above are:—

(1) Bullous or pemphigoid eruptions. Such cutaneous lesions occurring after the use of iodide of potassium are rare, but well recognized, and isolated instances of the same are recorded as taking place after the use of bromide of potassium and copaiba.

(2) Vesicular eruptions resembling eczema have been described as following the use of various drugs, but they are exceptional, and the details with regard to them are meagre.

Attacks of typical herpes zoster are described by Hutchinson and others as occurring during the administration of arsenic, but it is a question whether such eruptions are not to be regarded as coincidences rather than consequent phenomena.

(3) A scaly eruption, resembling psoriasis, is mentioned by Gower as appearing, in three cases, during the administration of borax.

With regard to the pustular lesions so often caused by the use of iodine and bromine compounds, the evidence, taken for what it is worth, indicates that the changes in the skin are due to direct irritation of its tissues, on account of the presence therein of iodine and bromine, two very irritating substances.

As to the other varieties of medicinal eruptions, although they differ widely from each other in appearance, many of them are due to what looks like disturbance of the vaso-motor system, and belong to the so-called angio-neurotic lesions of the skin, the type of which is furnished by the wheal of urticaria. For the production of the hæmorrhage into the cutaneous tissues which take place in the purpuric eruptions, there is apparently necessary some change in the capillary walls themselves. This process is generally independent of any angio-neurotic manifestations, although it may be combined with them, and thus give rise to a hæmorrhagic variety of such lesions.

The cutaneous manifestations which occur during the course of diabetes, apparently in consequence of the over-production of sugar in the system, have been made the subject of a special article by Kaposi, and may be of the angio-neurotic type represented by roseola, erythema, and chronic urticarial lesions, or of a more frankly inflammatory nature, consisting of furunculosis, carbuncular lesions, and even gangrenous dermatitis. The presence of sugar has been demonstrated in these inflammatory lesions, which call to mind the similar cutaneous changes caused by iodine and bromine.

The eruptions which have thus far been mentioned are, properly speaking, not diseases of the skin, but changes in the skin, which are symptomatic of the presence in the circulation of some material which is foreign to the organism, and which either enters into it from without or is the result of perverted and incomplete performance of its physiological functions.

The pathological changes in the skin, which are regarded as cutaneous diseases properly so called, are not unfrequently purely symptomatic in their nature, and a rational method of treatment does not lose sight of this fact, although the exact indications to be met are often obscure or entirely unknown.

The acute outburst of urticaria, sometimes accompanied by vomiting and febrile symptoms, which occurs after the use of certain articles of food in susceptible individuals, has its exact counterpart in the similar eruption following the use of various drugs, and many strange examples of such personal and gastronomic idiosyncrasy are recorded.

The chronic varieties of erythema and urticaria, on the other hand, which by recurring attacks form such an unpleasant feature in the existence of the sufferers therefrom, are symptomatic of some disturbance to the various physiological functions of the body, and external applications have upon them but a temporary and palliative effect. There is no doubt also that eczema and other cutaneous disorders, which are not so purely symptomatic in their nature as those already mentioned, may be aggravated and kept up by similar conditions of the system, and a strict attention to the functional integrity and vigor of the body, in addition to local treatment, is often necessary to secure a successful result. However clumsy and ineffectual our therapeutic efforts may be, they should not be employed without a clear recognition of the close relations existing in matters of pathology between the body and its cutaneous envelope, which renders Dermatology, of all the special departments of medicine, the least independent of general pathological states of the system.

### CONTAGIOUS DISEASES OF THE SKIN.

By ARTHUR VAN HARLINGEN, M.D., Prof. of Dermatology in the Philadelphia Polyclinic.

From the *Polyclinic*.—One of the first questions which occurs in the study of skin diseases, is:—

*What affections of the skin are contagious?* This is usually the first question which the patient puts to his physician: "Doctor, is this disease of the skin contagious? Have I caught it from some one, or am I likely to communicate it to some member of my family?" And it is a question which we should be able to answer at once, if we have been able to make a diagnosis. The number of contagious skin diseases is small. In the first place, we have syphilitic skin diseases, all of which are contagious, though in a varying degree. The later lesions of syphilis, as the late tubercular and gummatous lesions and late ulcers, belonging to what used to be called the "tertiary stage," are probably not contagious, or, at least, do not readily become the vehicles of contagion. I do not remember to have met with a case of contagion through "tertiary" lesions, nor can I recollect having met with the account of such a case in the literature of syphilis. Nevertheless, an excess of caution is not bad, and even here the patient should be warned against possible transmission. Still less dangerous are those dry, scaly lesions of syphilis, so often met with upon the palms and soles at any period subsequent to the first year of the disease. In order that syphilis shall be transmitted, it is necessary that the virus (in a moist condition, probably) should come in contact with a moist surface. I suppose that the scales taken from a case of papulo-squamous syphilitic eruption could be laid upon the unbroken skin of a healthy person, and could be bound or rubbed on and kept in contact indefinitely, without the disease being transmitted, while a dried crust of serum, with a little blood in it, coming from a syphilitic patient, if laid upon an abraded surface, would very soon give

rise to a chancre at the spot, with subsequent general infection. These facts should be borne in mind when prescribing for a patient with syphilis of the skin for the first time.

Next to syphilis, the animal and vegetable parasitic diseases may be mentioned as contagious in various degrees and under different circumstances. Scabies is contagious, but not as highly so under some circumstances as others. It is between bedfellows that the exchange is usually made, and so we can warn our patients against sleeping with others while we permit them the usual intercourse of home.

The various forms of pediculosis are all contagious. The *pediculus capitis* is most ordinarily conveyed not immediately, but through the medium of pillows, or among the young by the exchange of head coverings. The sleeping car is occasionally found infested with this vermin. The *pediculus vestimentorum*, or body louse, is probably conveyed from one bedfellow to another or possibly in the exchange of garments. The *pediculus pubis* is almost invariably conveyed in sexual congress, although it is possible to contract the disease in an unclean bed.—[It may be conveyed from one male bedfellow to another.—ED.]

The vegetable parasitic diseases are contagious in varying degree. Ringworm of the body may occur in any one, old or young, while ringworm of the scalp occurs only in the young, among children, in fact. Parasitic sycosis, true barber's itch, is likewise contagious, either through the medium of the soap used in shaving or through contact with skin ringworm in man or one of the domestic animals.

Favus is contagious, but this is so rare a disease in this country that I can scarcely recall a single case where contagion could be proved.

Tinea versicolor is only nominally contagious; but the possibility of such an occurrence must be kept in mind.

The affection known as *impetigo contagiosa*, occasionally appears as a sort of epidemic among the children of a neighborhood, especially among the poorer classes.

This comparatively trifling affection usually occurs in the form of one or several small, flat, withered-looking vesicles or vesico-pustules, which dry up and leave a yellowish or brownish crust. This crust often becomes detached at the edge, so that it looks as if it had been stuck on the skin. The locality affected is most commonly about the nose and mouth, and on the back of the hand.

There is a rather rare disease, formerly known as *molluscum contagiosum*, but now called *molluscum epitheliale*, which was supposed to be carried from one person to another by contagion, but I am inclined to doubt the contagious character of the disease, and have never seen sufficient evidence of it having been carried from one person to another.

Such, then, are the contagious diseases of the skin; and if the tyro in dermatology can exclude these from the diagnosis in any given case, he may assure the patient, with certainty, that he has neither caught his disease from some one else nor is he likely to convey it to others.

## VITILIGO.

By R. HARVEY REED, M.D., Mansfield, O.

From the *Cincinnati Lancet and Clinic*.—Prof. Duhring defines this cutaneous disease as "an acquired disease, consisting of one or more usually sharply defined, rounded or irregularly shaped, variously sized and distributed, smooth, whitish spots, whose borders usually show an increase in the normal amount of pigmentation."

Usually it is readily distinguished from *morphœa*, *chloasma*, *tinea versicolor* and *lentigo*, but should there be any question as to a differential diagnosis between this disease and the above it can be easily settled by the observation of the following characteristic points:—

## VITILIGO.

Chalky white or pinkish white spots varying from one to scores, of irregular shapes and sizes, surrounded with an areola of brownish yellow of varied intensity, which often coalesce.

The skin is smooth and the outlines of the spots well defined.

The skin feels normal to the touch and the secretions of the derma unimpaired.

No pain nor irritation of any character.

Has little or no tendency to recovery, spontaneously or otherwise.

I have in two instances seen vitiligo mistaken for chloasma, notwithstanding the following characteristics between these two diseases:—

## VITILIGO.

There is loss of pigment in one place, with increase of pigment in another.

May occur in either sex and at any age or time.

The prognosis is usually unfavorable.

## MORPHEA.

Usually commencing with one or two isolated round or elongated pinkish or purplish spots, surrounded with a pinkish or violet border.

The skin in the earlier stages is elevated, later may be on a level, or still more advanced, depressed below the surrounding integument, and the outlines not well defined.

The skin becomes dry, has a polished look, or is often shriveled, while the secretions of sweat are either diminished or suspended altogether.

Often associated with a tingling pain or numbness.

While of a chronic character, has a tendency to spontaneous recovery.

## CHLOASMA.

There is simply increase of pigment in one place, but no loss in any other.

May occur in either sex, but is much more common in the female than in the male, and after puberty than before, and during pregnancy or menstruation than at any other time.

The prognosis is more favorable, and especially so when due to uterine disturbances.

If there is any question existing between vitiligo and tinea versicolor, the microscope will readily clear that up; for in tinea versicolor as in chloasma there is no loss of the pigment and really no increase of the true pigment, but a brownish discoloration of the skin from the presence of patches of the microsporan furfur, which gives the skin a mottled appearance.

These brown spots can be easily removed with the finger nail, however, by moistening them for a few minutes and scratching them gently, and when placed under the microscope will readily enable you to distinguish between them.

It is almost impossible to confound this disease with lentigo or common freckles. The size and shape of the spots, and the want of the characteristic chalky appearance of vitiligo, together with the rapid increase of lentigo by exposure to the wind and sun, which does not affect vitiligo, would readily enable the most careless to distinguish between these two diseases.

In my experience I have found the treatment of vitiligo exceedingly unsatisfactory.

The only remedy which gave any apparent benefit was electricity used twice a week or every other day, directly over the parts affected, applying one pole at the nape of the neck and brushing the affected parts with the other.

The fact that electricity benefits some of these cases, does not prove that all the causes of this abnormal condition lies in the nervous system alone. It is quite possible that stimulating the nerves by electricity has its influence in correcting the duties devolving on the capillary system as well.

# MIDWIFERY,

## AND THE DISEASES OF WOMEN AND CHILDREN.

### ANÆSTHETICS IN LABOR.

By E. L. PARTRIDGE, M.D., late Prof. of Obs. in the N. Y. Post-Graduate Med. School and Hosp.

From the *Phila. Med. Times*, Aug. 8, 1885.—First of all come the questions as to whether or not we shall use any anæsthetic in labor; and, if we are to use one, under what circumstances. I believe in the use of anæsthetics in labor, for a number of reasons. An anæsthetic should be used almost invariably where an operation is to be performed, and it may be used with propriety in a great many natural labors, or labors in which no operation is performed. In the latter class of cases it is used to relieve pain, and also, oftentimes, to shorten labor.

Regarding the use of an anæsthetic when no operation is about to be performed, it should be used during the second stage, and not during the first. The only exception to this rule would be that of so-called forced labor, or labor hurried in the first stage, perhaps by Barnes's dilator or other means. Under these circumstances I might use an anæsthetic.

I should also prefer to avoid the use of an anæsthetic in the early part of the second stage, because it does modify to some degree uterine action. Under an anæsthetic labor-pains occur a little less frequently and with a little less degree of force than without. It may be necessary to employ an anæsthetic in order to enable the woman, who is suffering much pain, to remain quiet during the manipulations of the obstetrician in procedures which may be necessary for her welfare. I would wait for the suggestion of the patient before employing an anæsthetic to relieve pain. If it be not suggested, and I have no particular reason for using it, I should never urge its use. When, however, the patient is suffering severe pain, and will permit the administration of an anæsthetic, you will find that by complying with her wish you will save her nervous system a great amount of wear and tear. It is not necessary to produce full anæsthesia in order to lessen the patient's sufferings. It is only as the child is about to be born that I carry anæsthesia to the extent of rendering the mother unconscious. At this time it is important to guard against her making a sudden movement which may interfere with my efforts to protect the perineum. If the patient be phlegmatic, one who has herself well under control and can avoid becoming excited and restless, I should not employ chloroform in normal labor. On the other hand, in women who are under great agitation and excitement in labor, we see pains which have been irregular, short, and inefficient, become steady and strong when an anæsthetic is used.

Regarding anæsthetics during obstetric operations, such as version, the use of the forceps, etc., I think they should always be employed. I am free to admit, however, that in a few instances, where the head was in the sacral excavation, and the patient known, by experience in previous confinements, to have self-control and to repose entire confidence in me, I have delivered with the forceps without anæsthesia. But this experience does not repeat itself oftener than once or twice a year. In the operation of version I always use an anæsthetic, except in those rare cases of placenta prævia.

where every moment is of value and delay is dangerous. In cases of version it is particularly important that the uterine wall be not injured, as it might be, even to the degree of rupture, by one's knuckles coming in contact with the contracting walls if an anæsthetic be not used.

I know you will meet with physicians, and good physicians, too, who advise against anæsthetics in labor, claiming that they are unnecessary and exert a deleterious effect. It may be of interest to mention some of the objections to their use which have been brought forward.

The early objection that their use is immoral and unchristian may be mentioned only as a curiosity. Another objection which has been raised is that the mother, being rendered unconscious at the time of the birth of her child, is improperly deprived of experiencing what has been considered the greatest joy of her life—namely, the consciousness of another human being born into the world through her instrumentality. Such a sentimental objection cannot now be offered in seriousness. Another objection which has been offered is that, the patient under an anæsthetic being without sensation, an operation may be done in a bungling manner without her being able to give warning of the pain and injury which would be produced. It is true that if you were, for instance, introducing the forceps not inside but outside of the cervix, the patient, if she were not anæsthetized, would tell you that she was suffering pain; but in advising the use of anæsthetics in these cases the presumption of course is that the operator has average skill, and in that case there need be no danger of his doing violence.

Again, it has been claimed that puerperal fever, inflammations, and post-partum hemorrhage are more liable to occur when anæsthetics have been used; but I do not believe that the liability to the first of these accidents can be increased unless violence be used during the operation. I can conceive that post-partum hemorrhage would be a little more apt to occur after their use, and the increased liability to this accident should be recognized and guarded against by proper precautions. When these precautions are taken, and the patient well cared for, it will be avoided. I also believe that subinvolution and chronic uterine disease may possibly be a little more likely to occur after the use of an anæsthetic, and for the same reason—namely, that the uterus does not contract quite as well; and if the attendant be careless and do not bestow proper attention, the cavity may contain a clot for a number of days after labor, and the organ remain soft and flabby, and fail to undergo proper involution when the patient gets up and walks about. But certainly we are not enough more liable to have puerperal disorders after the use of anæsthetics than when they are not employed to warrant us in withholding them, particularly as a little extra care will avert them.

Regarding the kind of anæsthetic to be used, we have to choose between ether and chloroform. It is not worth while to take up the question of the value of other anæsthetics in labor. The pain is not in the cervix at all. You may do what you like with the cervix—scratch it, cut it with a knife—and you excite scarcely any pain at all, unless the irritation is of a character to cause a disturbance of the connecting cerebro-spinal nerves. If you wished to produce any effect with cocaine during labor, you would have to apply it to the ilio-inguinal and ilio-hypogastric nerves. It would seem that those who have advocated the use of cocaine to control the pain of labor have done so prematurely, and without sufficient consideration as to the probable way in which it must act.

Coming back to the question of the relative value of ether and chloroform, I may first say that I usually employ chloroform, and expect to continue to do so for certain reasons which I will mention. I may also say that in surgical practice I would never use chloroform, and I should have no sympathy with a physician who, being in the habit of using chloroform in general surgery, should lose a patient from this anæsthetic.

In obstetric practice, however, I regard chloroform as the proper anæsthetic to be used; but it is important to remember that its use is attended with a certain degree of danger. Women have died during labor from the effects of chloroform; but in almost all such cases it has been carelessly administered.

I know of no remedy, regarded of great value in medicine, which is not capable of doing harm if used improperly.

There is a difference between the condition of the patient who is about to undergo a surgical operation demanding an anæsthetic and that of a woman in labor to whom it is proposed to administer chloroform. In obstetric practice your patient has been suffering from severe pain, which has probably continued for a considerable length of time; and, when the use of an anæsthetic is suggested, your patient, instead of being rendered apprehensive, is eager to have it used. Where severe pain has existed for some time, the nervous system becomes unnaturally tolerant of anodynes. This is illustrated in peritonitis, in which condition a person is able to bear enormous doses of opium, such doses as would cause death in a state of health. Now, in surgical practice, where we have previously existing a moderate degree of pain or no pain, the patient looks upon the operation with apprehension, he comes to the operating-table blanched, his nervous system is in a state of depression rather than of excitement, and it is less tolerant of the influence of the anæsthetic.

Then there is another important difference regarding the degree of anæsthesia required in general surgery and in obstetric practice. In the former it is necessary to carry the anæsthesia to the third stage, or the stage of complete muscular relaxation and unconsciousness, while in the latter it should be carried only to the second stage, in which the patient is unconscious of what is being done, but whose muscular system is not entirely paralyzed and the uterus still continues its contractions.

Let us consider some of the advantages to be derived from the use of chloroform as against ether. First, the change from a condition of consciousness to one of unconsciousness is very quick, and during an operation you can, if it be desirable, let up the anæsthetic and consciousness will return; and when it is desired that anæsthesia should again exist, a few moments' reapplication of the agent will bring about unconsciousness. With ether it is otherwise, and you cannot permit her to return to consciousness until operative procedure is completed.

A very serious objection to the use of ether in obstetric practice is that it gives off an inflammable vapor. With chloroform there are no such vapors to explode.

Permit me to say that there are some well-authenticated cases of death from chloroform during labor. Dr. Turnbull, of Philadelphia, some years ago collected two or three cases, and perhaps more have been added to his list. It is important to know this and bear it in mind, so that you will be led to guard against the danger.

There are certain safeguards against the dangers of chloroform which are worthy of mention. One is the addition to the chloroform of nitrite of amyl. I think it has been positively demonstrated that nitrite of amyl is an antidote to chloroform-poisoning, and it has been suggested that to every ounce of chloroform employed for anæsthetic purposes there be added ten drops of the nitrite of amyl. We have not yet the statistics that would show the positive advantage of this mixture, but I believe it would be proper to give it a trial.

Should chloroform be diluted? It ought to be diluted with atmospheric air, but with nothing else. Mixtures of chloroform and ether and of chloroform and alcohol have not given results which make us feel that they are safer than chloroform alone. Chloroform itself is as safe as a mixture of chloroform and ether.

Speaking of the dilution of chloroform with atmospheric air brings us to the subject of the manner of administration. Such a cone as that which is employed in ether inhalation should never be used in giving chloroform. The chloroform should be put upon a handkerchief laid out straight, and this held by a competent attendant from an inch to an inch and a half away from the nose. It should never be allowed to cover the mouth and nostrils. I always apply it myself until the patient has been rendered unconscious. A method which is sometimes practised, and which is a very good one, is to put a crumpled handkerchief into the bottom of a whiskey glass or small-

sized tumbler, and pour the chloroform upon it. The rim of the glass being rigid, it is impossible for it to fit over the nose and mouth so as to exclude all air from the mouth and nostrils. Remember you should always remove it when it is not required, for when it is necessary anæsthesia can be renewed with facility. Never carry it to the point of causing the patient to snore, and if this stage should be reached allow the admission of a greater amount of air.

A few words regarding chloral may be spoken here. This agent can never take the place of chloroform in obstetrics, but it has a sphere of usefulness of its own. I have told you that chloroform should not be used during the first stage of labor, but chloral may be employed with propriety and benefit at this time. Chloral, however, is without value, or is of doubtful value, during the second stage, for it will not overcome the pain; and should you use it you would probably find it necessary to substitute chloroform later, and the two drugs make a dangerous combination. I should not feel that it was as safe to use chloroform upon a patient who was already pretty well under the influence of chloral as upon a patient who had not received the latter drug. The latter drug, when used to modify the pain of the first stage of labor, may be administered by giving fifteen grains every half-hour until three or four doses have been taken. Under the influence of chloral, the moment a pain is over the patient will fall asleep, and, while she will be aroused by the next pain, she will not seem to appreciate it so fully as when no narcotic is given. The objection to chloral is that you have to wait for its influence to wear off, and it may thus interfere with the administration of chloroform in the second stage of labor; but where there is a rigid cervix, or the patient is nervous and excitable, you will find that chloral will be of service during the first stage of labor.

There is another objection to chloral which I have not seen mentioned in books, which is that after forty-five or sixty grains have been administered, the patient will be liable to manifest a mild delirium, talking wildly, which excites apprehension on the part of her friends.

In giving an anæsthetic in labor, bring the patient under its influence before you make any preparations for the operation, and before changing her position in the bed.

Again, it matters not what anæsthetic you may use, never administer it until you have obtained the consent of some one besides the patient herself—the nearest relative or friend who may be by at the time.

## DIAGNOSIS AND TREATMENT OF POSTERIOR POSITIONS OF THE OCCIPUT.

By WILLIAM L. RICHARDSON, M.D., of Boston.

From the *Boston Med. and Surg. Jour.*, Aug. 13, 1885.—Called to a case of labor the physician promptly responds. According to the account, given by an intelligent nurse, the labor has been going on two or three hours. The patient's condition, both mental and physical, is good. A vaginal examination discovers the os uteri to be one-third dilated, the child's head presenting. Having assured all the interested parties of the perfectly satisfactory condition of the situation, the doctor hastens away to complete the work of the day, so as to be on hand when his services shall be required. A few hours later he finds the os uteri fully dilated, the head somewhat descended, although not quite so far as he had anticipated, and he once more hastens away to make the remaining one or two visits, possibly revolving in his mind, however, the conscious surprise that he experienced in not finding the head further advanced. Returning in an hour, the head is found to be a trifle lower, the pains excellent, but the woman somewhat tired. Realizing that the end is not far off he awaits the termination of the labor,



which is now, in his opinion, close at hand. Time passes; the pains are all that could be desired, but the child is not born. Flattering himself that the head is lower, at least it ought to be, and he hopes that it is, he waits. One, two hours go by; the woman, like the doctor, becomes impatient, but there is no progress, except what the doctor tries hard to imagine. The patient's pulse, as well as her mental condition, is beginning to show the effect of the labor. It is evident that something must be done, and, all that is needed is a little help, the aid of forceps is invoked. Assuring the patient and her friends that the operation really amounts to nothing, and that in a few moments, without further suffering, the child will be born, the patient is etherized, the forceps are applied, traction is exerted, and the forceps begin to slip. Surprised, disappointed, wondering and with some misgivings, the forceps are reapplied only to slip again; the head remains where it was. A more careful examination is now made, but no light is thrown on the problem, and the puzzled attendant asks for the assistance of a friendly professional brother. He arrives, but somehow the forceps again fail to work. The case begins to look serious. At length, after alternate pulling on the handles and readjusting of the blades, the child is delivered stillborn; the perineum is sewed up, and the doctors retire homeward, each explaining to the other what the trouble was, and, at the next meeting of the local medical society, the doctor reports the case as one of difficult forceps, owing to a slight, though undescribed, pelvic deformity. The nurse, if very intelligent and observing, wonders to herself why the face, when it escaped from the vulva, looked forward instead of backward, and the youngest member of the local society, fresh from the medical school, suggests that the trouble might have been due to an unrecognized posterior position of the occiput, and consequently a wrong application of the forceps; a suggestion received with that silent smile of experience which at once sets the young man to thinking, and possibly also some of the older members of the society.

The above undescribed but assumed pelvic deformity is the cause of a fair proportion of stillborn children.

The careful obstetrician is one who recognizes that for an intelligent attendant on a case of labor a knowledge of the fetal position is just as important as a correct diagnosis of the presentation. As a rule, however, practitioners usually content themselves with making out the presentation. As a matter of fact, it is in these head presentations that a comparatively slight deviation from the usual position can occasion more difficulty than in any other, for the reason that the deviation is usually unrecognized and the assistance often rendered, when the case does not progress as the practitioner had anticipated, is consequently unscientific and not unfrequently precisely the reverse of that which the condition demands.

The diagnosis of a position would be rendered much easier if the practitioner would avail himself of the great advantage to be gained by the use of external palpation.

Judging from my own experience in consultation, with physicians, this method of making out the position of the fœtus in utero is rarely practised except by the younger members of our profession fresh from the medical school or the continental clinics. Those who do practise it will, however, agree with me that, by the use of abdominal palpation, we are enabled, in the great majority of cases, to accurately make out not only the presentation but the position; a diagnosis which should always be subsequently confirmed by a vaginal examination.

The woman should lie on her back with the legs extended and slightly separated. The examiner should stand on the level of the umbilicus, and on either side as is most convenient. Having assured himself that the bladder is empty, he should place his hands flat on the abdominal wall, telling the patient at the same time to make several deep expirations. In this way he is soon able to thoroughly examine the uterus and the pelvic cavity with their contents. On one side of the longitudinal axis of the uterus the resistance offered by the back of the child will be felt, while on the other side the resistance is much less marked and of a different character, being

only that offered by the liquor amnii and the fetal extremities. The location of the dorsum is thus easily made out, and the occiput must be on the same side. Is it anterior or posterior? If it is posterior a more limited resisting surface is felt, and one which is more marked the farther one goes from the median line and the nearer the palpating hand reaches the lateral border of the uterus. If it is anterior the resisting surface passes to a greater or less degree over the median line, and, in many patients, the fetal vertebral column can be distinctly made out, which of course can never be done if the position is posterior.

There are of course cases in which, owing to an unusual thickness of the abdominal wall or a large amount of liquor amnii, it is not possible to so accurately map out the fetal outline in the manner described as to say positively whether the occiput is anterior or posterior. But even in these cases an external examination will rarely fail to greatly facilitate the determination of the position.

The diagnosis of a posterior position of the occiput having been made, the progress of the case should be carefully watched, with a view of an immediate detection of any *failure of proper flexion*. The posterior fontanelle should always be easily reached, while the lower the head descends the greater the difficulty in touching the anterior fontanelle, on account of the crowding of the frontal end of the fetus against the symphysis pubis. If at any time during the progress of the case the posterior fontanelle remains stationary while the anterior is becoming more and more easy of access, the attendant is at once conscious of a gradual extension of the head. It is at this time that an intelligent interference with the case can be of the greatest service. The fingers of the right hand, if the occiput be to the mother's right, should be applied to the frontal end of the head, and, during a pain, a firm resistance, not pressure, should be kept up to prevent any further descent, and the actual flexion of the head should be left to the pressure exercised on the occipital end by the force from above occasioned by the uterine contractions.

Where in posterior positions of the occiput the head has become to any degree *extended*, the use of the forceps, as usually applied, only serves, when traction is made, to increase the extension, thus facilitating the change of an occipital into a face presentation. The object I have endeavored to obtain in the use of the forceps in this class of cases, is not only the descent of the head, but its flexion. Several times at the Boston Lying-In Hospital, and in my own private and consultation practice, I have been able to overcome the existing difficulty, and to effect both the descent and flexion and consequent rotation of the head, by the application of the forceps *reversed*; that is, with the convexity of the pelvic curve toward the pubes instead of toward the hollow of the sacrum as is usual. To effect this change of flexion, the blades should be introduced in such a way that the cephalic curve should pass over the ears of the child, the tips resting on the occiput. When traction is exerted, the forceps being so applied, the result must be that the main force of the traction is expended on the occiput, and, as the result, the occiput is drawn down and the head tilting on its attachment to the spinal column yields to the leverage thus applied, and the frontal end being forced up the flexion of the head is at once established, and the occiput becomes the lowest part; the case can then be left to nature, and the forward rotation of the occiput soon takes place.

The object sought in the preparation of the paper has been to insist upon the necessity of early making out the position, as well as the presentation, in every case of labor; the great advantage to be gained from the practice of an external palpation of the abdomen; in cases of posterior positions of the occiput the importance of an early recognition of any lack of flexion which will be liable to prevent the subsequent forward occipital rotation; the danger, if forceps are applied to an extended head so situated, of still further increasing the extension, and the ease with which traction, applied on the occiput by means of the forceps reversed, not only restores the lack of flexion, but also facilitates the forward rotation of the occiput and the speedy and successful termination of the labor.

## THE OPERATION OF EPISIOTOMY.

By REYNOLD W. WILCOX, M.D., of New York.

From the *N. Y. Med. Jour.*, Aug. 15, 1885—Episiotomy is no new operation, nor is it an abandoned one recently resurrected, but one, although influenced by the fluctuation of obstetrical opinions, in uninterrupted use for more than a century. In performing episiotomy it is intended to avoid rupture of the perinæum, arising from all causes except those referable to the force and character of the pains. The causes of perineal rupture are:

1. From condition of the soft parts. (a) Rigidity, by which we mean that the perinæum shall be anatomically normal—the perinæum of inexperienced obstetricians. In this case the vaginal orifice can be dilated to the size of the child's head, yet the hyperæsthesia of the muscles prevents this end. (b) A second condition to which this term is applied when the vaginal outlet is anatomically incapable of full distension, when the surrounding tissues are not fully developed, or, as in old primiparæ, the tissues are inelastic. (c) A condition of the muscular fibres which renders them unable to bear moderate strain, a state of affairs found in tissues for a long time subject to congestions, indeed analogous to the fatty infiltrations and degenerations. (d) Excessive width or length of the perinæum.

11 From condition of the bony parts. (a) The narrow pubic arch "male pelvis," or, what amounts practically to the same result, a thickened condition of the urethral structures. (b) Too little inclination of the pelvis.

III. On the part of the child. (a) Incompressibility or excessive size of the head. (b) Malpositions and malpresentations.

Lastly, the feeling on the part of the accoucheur that, "if laceration is inevitable, treatment to prevent it can be of no avail." In the three classes mentioned it is assumed that the conditions present do not exist to such an extent that birth is not possible without other operative or instrumental interference. It is to hasten the result and to avoid the unfortunate consequences of perineal rupture that this operation is demanded.

That unavoidable perineal rupture takes place is proved conclusively by the records of clinics where no one is allowed to practice midwifery until shown competent by examination.

The advantages of episiotomy are not disputed in cases of atresia vaginæ or in any structural contraction. Granting that a laceration is inevitable, the operation removes it from the median line and locates it in the exact position chosen by the accoucheur. This avoids the danger of a laceration through the sphincter ani, and also relieves the strain upon the recto-vaginal septum, preventing a central rupture. Also as is stated by Elder, episiotomy limits the extent of the lesion. In Credé's cases not a single case of total rupture occurred.

The operation causes pain, very slight in amount if it be properly done, but by no means to be compared to the pain that it saves by shortening the period of labor and by substituting a rapidly healing for a slowly suppurating wound.

The weightiest argument of all against episiotomy is the fact that it will not always prevent a laceration. In Credé's cases the laceration occurred in one and four-tenths per cent. of his episiotomies, a small percentage indeed when one considers the value of the operation. Leishman's statement, that the incision will always be extended as the head advances, is unsupported by the facts and is contrary to our own experience. It is conceded that we can not always estimate the extent of the laceration; thus we cannot always avoid slight addition to the incision; but even this is far preferable to the spontaneous laceration. The percentage of extensions given above is far too small to condemn the operation.

In performing episiotomy, the left lateral position for the patient is preferable, since the advance of the child is then under perfect control.

The patient being in the ordinary side position, the operator, controlling the advance of the child's head with his left hand, takes the blunt-pointed, straight bistoury in his right hand. He inserts it, at the commencement of a labor-pain, between the presenting head and the thinned edge of the vul-

var outlet, flatwise, and where the outlet bulges most, generally at the distance above indicated from the commissure. The bistoury is held in this position during the increase and until the acme of the pain, the left hand being likewise kept in place. Immediately after the acme has been reached the edge of the bistoury is turned at a right angle to the edge of the vulva, the head being prevented from being forced out by a sudden exacerbation of the pain; the incision is made outward, from one half to one inch, through the resisting structures. The labor now is conducted as usual, the head, as a rule, passing out at the next pain. In most cases no after-treatment is required, as the wounds almost invariably close by first intention if carefully cleansed. If the operator believes the suture to be necessary, it is done in the following manner: The first suture should enter at the junction of the skin and mucous membrane, at the upper angle of the wound, coming out at the corresponding lower angle, and be tied. The second suture is to cover in the two small surfaces left, the one in the skin and the other in the vagina. This suture passes through the skin into the vagina, over the vaginal wound, out through the skin, and is tied over the skin wound. Iodoform dressing is then applied. The sutures are removed about the sixth day, and one will find with difficulty, a fine cicatrix, if he examines the parts, at the end of the third week.

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By G. R. HILL, M.D., Carthage, Mo.

From the *Weekly Med. Review*.—I desire to call your attention to a condition that I have been recently led to believe plays a more important part, in the many difficult labors with which we have to deal, than is generally supposed by the profession, namely, the natural or accidental shortening of the umbilical cord, by reason of it being coiled one or more times around some portion of the child's body. Of ten cases since August 29, 1884, seven were more or less retarded by the conditions above mentioned; in one the patient was delivered with forceps. The duration of labor in this case was about twenty hours, dating from my first visit. The membranes were ruptured with the hope of lessening the tension on the cord, but little was accomplished in that direction.

On studying my cases more closely, I found that by pressing with one hand firmly on the fundus of the womb, and passing the index finger of the other into the vagina until in contact with the head of the child, that at every recurring pain the head would advance but immediately recede upon the cessation of the pain, which I believe to be due to the well-known elasticity of the cord, its tension and shortness, and the character of the pain.

Nothing of a very serious nature occurred in these cases other than the extreme pain and fatigue to my patient and the unusual length of time that expired before the birth of the child. But we are warned by some writers that serious results not infrequently occur in such cases, both to mother and child, by reason of an early detachment of the placenta and the attendant hemorrhage.

Dr. Barker is convinced that coiling of the cord is more often a cause of difficult and retarded labor, of death of the child, and of violent hemorrhage before the expulsion of the placenta, than is commonly supposed. He makes it a point to pass a finger up every time, and if he can feel the cord encircling the neck, cuts it, if necessary, before delivering. Cazeaux has given us a full and complete history of coiled cord as a factor for evil in difficult labors; he says in plain and unequivocal language that the shortening of the cord may retard the progress of the head, whether at the superior or, having cleared the excavation, at the point of engaging at the inferior strait. He further states that the shoulders may be arrested and the delivery of the trunk be prevented after complete disengagement of the head. In this emergency the division of the cord becomes an urgent necessity and should be done without delay, lest the child's life be compromised,

The treatment will depend in a great measure in what stage of labor the existence of coiled cord is fully made out as retarding labor. If we are convinced from the symptoms present that we have a case of coiled cord while in the first stage of labor, the os uteri being sufficiently dilated, the membranes should be ruptured, which will materially lessen the volume of the womb and relieve measurably the extreme tension upon the cord, and by compressing the hypogastrium downward and backward during every succeeding pain and in the intervals prevent it from ascending, you will find very soon that your case will have advanced to the second stage of labor, and possibly be completed without further trouble; but should you still have those alternate movements of elevation and descent, and should your patient complain at every recurring expulsive effort of a most excruciating, localized pain, I would advise the use of forceps, believing it my duty under the existing circumstances to terminate the labor as speedily as possible, that the life of both mother and child may not be compromised; the latter, however, I apprehend, would most likely suffer in consequence of either a ruptured cord or a detached placenta.

#### ANTISEPSIS IN LABOR.

Dr. OTTO VON HERFF, in a paper read before the "Verein hessischer Aerzte," at Darmstadt (*Archiv für Gynäkologie*, Bd. xxv., Hft. 3) advises the following antiseptic procedure in labor cases:

- I. Careful disinfection of the physician, midwife and nurses.
- II. At the beginning of labor the external genitalia should be washed with a weak solution of corrosive sublimate; the pubic hair should be shortened.
- III. During the progress of a normal labor, prophylactic irrigation of the vagina is not necessary. Vaginal injections are indicated only in such cases where there is a suspicion of a possible infection, either through the midwife or through disintegration of the secretions in delayed labors; weak solutions of the bichloride should here be used, as 1 to 5,000 or 1 to 3,000.
- IV. The same is true regarding prophylactic uterine irrigation immediately after abnormal labor; it is not necessary. It should be used, however, in special conditions, as, in cases in which the hand has been introduced into the uterus, or where intra partum decomposition has taken place in the uterus, or after the birth of a dead, macerated fetus, etc. Weak solutions of the same strength as given above, should here be used.
- V. If labor has progressed normally, and the period after it also, there is no indication for vaginal or intra uterine irrigation. But in puerperal diseases either a weak or a strong solution of the bichloride is indicated and is generally followed by immediate success.
- VI. The stronger solutions of corrosive sublimate, especially that of 1 to 1,000, should only be used in urgent indications, as, for instance, in dangerous septic puerperal fever.
- VII. In all cases of irrigation by corrosive sublimate, vaginal as well as intra uterine, with weak or with strong solutions, the following precautions are strictly to be observed:—
  1. Only a small quantity of the solution should be used, not more than two litres, one litre generally sufficing.
  2. The irrigation should be ended as rapidly as possible.
  3. Care is to be taken that there is attained during and after irrigation a free and complete drainage of the disinfecting fluid, so as to prevent any retention of the same.
  4. In cases of atony of the uterus, or in large wounds of the genital passage, irrigation with corrosive sublimate is not to be employed; nor should these irrigations be used (if there is any chance of getting along without them) in anæmic individuals, or in persons suffering from kidney disease, or in women who have been treated with mercury at a former time.
  5. Intra-uterine irrigations of corrosive sublimate and especially those of the stronger solution, are to be given by the physician himself. Expert

midwives, however, may be permitted to give simple vaginal injections with solutions of the strength of 1 to 5,000.

6. The instruments used for irrigation should give a continual stream with but slight pressure. Absolute cleanliness of instruments as well as of the entire surroundings is to be strictly attended.

If these precautions are observed, there is no probability of the occurrence of poisoning by corrosive sublimate, whether vaginal or intra uterine injection have been used. The advantages of this drug are, aside of its certain antiseptic properties, its cheapness, its solubility, and its odorlessness. Occasionally, in sensitive women, it causes a severe burning sensation of the genitals, lasting for hours; the author observed three such cases in which he used a solution of 1 to 3,000. Another objection to the drug is that it affects metal instruments.—*Weekly Med. Review*, Aug. 8, 1885.

### ELECTRICITY IN OBSTETRICS.

Dr. W. T. BAIRD presents in the *American Journal of Obstetrics*, the following tabulated comparison of ergot with electricity:

ERGOT.	ELECTRICITY.
1. Action slow—no response until after 20 or 30 minutes have elapsed, thus losing time, thereby occasionally proving fatal to the patient.	1. Actions instantaneous thus economizing time, and so in some cases proving of great value to the patient.
2. Action uncertain; in some instances it will entirely fail to produce uterine contractions.	2. Action certain; it need never fail to produce uterine contractions.
3. Action uncontrollable; it will sometimes "lash the uterus into a fury," which may produce laceration of the cervix or perineum.	3. Action under perfect control of the operator; therefore it may never endanger the integrity of the cervix or the perineum.
4. Action always followed by shock, and sometimes by great exhaustion.	4. Action never followed by either shock or exhaustion.
5. Action attended with danger, and always with an increase of suffering.	5. Action harmless, and always attended with a diminution of suffering.
6. Action continuous, allowing no time for rest, thus violating one of the wisest provisions of nature.	6. Action rythmical, "giving ample time for rest," thus simulating nature.
7. It cannot be safely employed until dilatation of the os is well advanced; therefore its use is restricted to the latter part of the second and to the third stages of labor.	7. It may be employed as soon as the first labor pains set in, and thus facilitate the labor in all of its stages.

Further on in the same paper, the author gives the special indications for the employment of electricity as an oxytocic. He states that electricity may be deemed indicated in any case where it may be desired: (1) To modify the pains of labor. (2) To favor a more rapid dilatation of the os. (3) To promote more vigorous uterine contractions. (4) To add tone and strength to all the muscles engaged, and "increase their power of doing work." (5) To abridge the time occupied by the labor. (6) To prevent shock, exhaustion, and post-partum hemorrhage. (7) To insure contraction of the uterus in cases of instrumental delivery. (8) To act as an auxiliary in the induction of premature labor. (9) To arrest hemorrhage, and accelerate labor in

cases of placenta previa. (10) To prevent an undue expenditure of nervous force, in all cases of debility from whatever cause, thus leaving the patient in a condition to secure a speedy and favorable convalescence.—*Weekly Med. Review.*

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#### A FŒTUS ENCLOSED IN ITS SISTER'S PLACENTA.

From the Proceedings of the *Chicago Gynecological Society*.—Dr. J. H. ETHRIDGE, reported a case (Fœtus Compressus. Fœtus Papyraceus) occurring in a married woman 22 years of age, who was delivered of a mature female child after a normal labor of four hours duration.

The outer surface of the placenta showed a deep furrow between the two placentæ, which were united, on their amniotic surface, by a series of compact white bands, discoverable only by pressing through the furrow. The large placenta constitute about two-thirds of the entire mass. The smaller placenta was thin, flat and compact, being about one-third as thick as the larger one.

The placenta of the living child was normal throughout its extent. Cotyledons were well marked, the tufts and villi presenting normal microscopical characters. The placenta of the fœtus compressus, in about nine-tenths of its extent, was whitish-yellow, and very firm. The whole thickness of this portion of the placenta, excepting its amniotic surface, presented one unbroken mass of fatty degeneration. The remaining one-tenth of the placenta presented a carneous appearance, evidently a transition stage between normal placenta and complete fatty destruction. Its cotyledon were enmassed and its tufts and villi solidified and the whole was interspersed with initial fatty depositions.

*The Fœtal Surface of Placenta.*—The two segments were wholly different at time of birth. The placenta of the living child presented a normal appearance. The placenta of the fœtus papyraceus presented the appearance of a closed bladder, which, upon examination, was found to be an unruptured amnion, containing amniotic fluid and the fœtus. The development of the fœtus compressus corresponded to the third month. The cord of the fœtus papyraceus was ten cm. longer than that of its fellow, and much thinner. The cord was inserted into the margin of the placenta, near the fully developed organ.

*Pathology.*—Among the causes, producing the death of the fœtus, the following may be mentioned: (1) Faulty insertion of the cord, at the margin of the placenta, adjoining its fellow. (Kieselhausen), (2) Faulty structure of the cord; thin, twisted, or deficient in the jelly of Wharton. (C. Braun). (3) Diseases of the placenta. (4) Traumatism. (5) The implanting of the umbilical vessels too closely together, and arterial anastomosis.

Dr. J. W. Jaggard regarded the case as specially interesting because it had a bearing upon the subject of superfecundation and superfoetation. On *a priori* grounds, it was possible that superfoetation could occur as late as the twelfth week of pregnancy,—when decidua vera and reflexa became united. Up to this time, it was possible that egg and spermatozoid might come in contact. Superfoetation was also possible in cases of double uteri. Up to the present time, however, no case has been recorded which does not admit of a simpler explanation. There exists a great weight of evidence in favor of superfecundation. Mares give birth simultaneously to horse and mule foals; bitches, running during the period of rut with different breeds of dogs, throw young of different, so-called bastard forms, corresponding to the breeds of the male progenitors; the same is true of cats. A woman may give birth to twins, one of which is white, one black. The latter fact, however, does not necessarily demand for its explanation intercourse at or near the same time with a white and a black man, since in crossing races, the offspring may resemble either father or mother, or one child may resemble the male, the other the female progenitor.

## PLACENTA PRÆVIA.

By E. G. EDWARDS, M.D., of London, Canada.

From the *Canadian Practitioner*, Sep., 1885:—Unavoidable hemorrhage is admitted, I believe, by all to be due to the attachment of the placenta over part, or all, of the os uteri, partial detachment of the same causing the hemorrhage.

Accidental hemorrhage, on the other hand, occurs from placental detachment of a normally situated placenta. Dr. Edwards then gives the histories of seven cases and concludes his paper as follows:—

Judging from my own experience, coupled with what I have read and heard respecting the treatment of placenta previa, my own views are the following: That after one severe flooding the sooner you deliver the better, more especially if there are labor pains. In five out of six cases there were more floodings than one. I recommend, when head presents, to separate the placenta from os uteri all around as far as you can reach, if labor has commenced. Then, if possible, detach the placenta on one side completely, so as to allow you to reach the membranes and rupture, to give ergot by the mouth or ergotine by hypodermic injections, and use a little pressure over uterus externally. In most cases as the water discharges the head descends, thereby plugging, by pressure on the placenta, so thoroughly as to check the hemorrhage. I am in the habit of emptying the bladder by a catheter and having forceps on hand, and a roller bandage around the abdomen in order to give external support if required, and holding a plug against the os with my hand if the flooding is severe. I had no occasion to use forceps in any case of placenta previa so far.

Respecting turning, I should, in cross birth, carefully try to turn by manipulation by finger in the vagina and external assistance.

My advice is never to introduce the hand through the placenta and thereby gain entrance into the uterus for the purpose of turning, for thereby violence is sure to follow. In fact I am not an advocate for turning by introducing my hand into the uterus under any circumstances, unless all other means fail; as I consider that procedure very injurious to the mother and very apt to be followed by shock or by inflammatory action of some kind. Possibly in some cases no other mode is practicable, and it must then be had recourse to. Respecting plugging, I have always succeeded in arresting hemorrhage by this means, giving thereby safety and time. It likewise stimulates the uterus, and the os is found more dilated. I would not give ergot unless I knew the bladder was empty, the parts proportionable, the os dilatable, and instruments at hand. Flooding nearly always relaxes the os. My rule in giving ergot in first to make sure of head, feet or breech presentation, with some pain, and in cases in which I have decided to deliver at once. Ergot would only increase the mischief in placenta previa, unless it was given to assist your efforts at the time of expulsion of the child.

Respecting hot drinks, I am aware that cool or cold drinks are generally recommended in cases of flooding. I do not, however, believe in giving cold drinks in shock or great depression. Opium, in small doses, as a stimulant, I hold very valuable in floodings, and large doses in the cases requiring the plug, to give rest and sleep when time for rallying is necessary.

I once dreaded placenta previa cases as amongst the most dangerous in midwifery; I now look upon them as being very manageable, unless there should be an excessive loss of blood before we see the patient, and even then, in most cases, we can stop the pains by larger doses of opium, plug, then wait until the patient rallies, then deliver.

I am, as before stated, of the opinion, if there has been great loss of blood, that the sooner you deliver the better, provided the hemorrhage continues, and there is pain, and the patient not too weak; but you should not introduce the hand into the uterus if you can possibly avoid doing so, always giving an anæsthetic when you do. I put emphasis on this latter—anæsthetic (ether or chloroform). My practice and advice is, in all severe midwifery operations, to give one or the other. My reasons for thus advising are: (1) It is humane and prevents unnecessary suffering. (2) By its use depression and shock are lessened, if not prevented altogether.



Allow me here to say that I, at any rate, have not, neither do I intend adhering to the old traditional theories and procedures respecting the use of anæsthetics in midwifery.

In conclusion, following up turning in cases of placenta previa, the only argument I can conceive justifying it when the head presents is the speedy delivery of the child in order to save its life. But how often will we be disappointed in this, as it is well known where some floodings have taken place the child is usually born dead. To compensate for that, by plugging and waiting the shock of introducing the hand into the uterus will be avoided and the maternal parts not injured. I believe the time is not far distant when turning, by introducing the hand into the uterus, will be the exception, not the rule as at present.

I have adopted a procedure of my own, viz., when called to a case of placenta previa near the end of pregnancy, when flooding is in progress, with the pains continuing, and the patient not too weak or exhausted, to separate as much of the placenta as I can on one side, detaching a portion of it completely from one side, bringing it down into the vagina; and if the os is not well dilated, and the pain continuing, to squeeze the detached portion between my fingers, or to press it firmly against the opposite side until the os dilates; then I give ergot and rupture the membranes, still pressing the detached portion of the placenta until the head descends sufficiently to check the hemorrhage.

#### PLACENTA PRÆVIA AND TWIN PREGNANCY.

*Proceedings of the N. Y. Obs. Soc.*—Dr. H. T. HANKS had recently been requested by Dr. Bull to see a patient with placenta prævia, who, after the seventh month, had lost so much blood that it was decided to effect an early delivery. After giving ether, Dr. Bull introduced his hand into the uterus, seized the foot of the child, and extracted it, not waiting, on account of the amount of blood which had been lost, for uterine contractions. The placenta did not come away at once, and it was found that there was a second child, which also was extracted by the feet. The placenta was double. Very little blood was lost after the extraction of the first child. Both children were living, but one, being quite weakly, died within a few days.

Dr. R. A. Murray inquired whether there had been repeated hæmorrhages, or only a single severe one.

Dr. Hanks replied that there had been slight attacks of hæmorrhage for a few weeks before delivery.

Dr. Murray had made the inquiry because, in his experience, cases of placenta prævia, so far as hæmorrhage was concerned, fell into two classes; those in which there was a slight dribbling of blood for some time before term, and those in which there was but a single attack of hæmorrhage, which was severe and occurred at the onset of labor. In the latter class the hæmorrhage would almost certainly prove fatal to the child. He referred to two instances which could be attested by certain members of the society. In one the woman was in perfect health, and had been out driving the day before an extremely severe hæmorrhage took place, which rendered her pulseless at the wrist and in the femorals, and caused the death of the child.—*N. Y. Med. Jour.*

#### MOLE PREGNANCY, HYDATID MOLE, OR CYSTIC DEGENERATION OF THE CHORION.

By ALEXANDER DAVIDSON, M.B., M.R.C.S. Eng.

From the *Canadian Practitioner*:—Mrs. W., æt. 45, of dark complexion, has borne several healthy children, last pregnancy was five years ago, when she was delivered of a healthy child, since then she has menstruated regularly until about the middle of January, 1885.

This lady consulted me on the 18th of March, 1885, and said "If it were not for my age I would consider myself pregnant again. Having assured her that her age was not an absolute barrier to the occurrence of conception,

and her symptoms pointing so markedly to the existence of pregnancy, I deemed that to be her condition. I advised her to go home and wait the course of events. Upon this advice she acted, again returning to my office on the 18th of March, when she informed me that since our last interview she had "turned unwell," and that she also observed a "lump" in the lower part of her abdomen, and suffered no pain. I then made a physical examination of the uterus, which revealed the following condition. The abdominal walls were thin and flaccid, just above and behind the pubes in the mesial line, was a pear-shaped tumour to be felt, bi-manual examination now confirmed this tumour to be the uterus enlarged to about the size the organ assumes at the third month of pregnancy, the cervix was soft and thick, it was also fissured; the os uteri was patulous enough to allow the introduction of my index finger to nearly the whole length of the cervical canal, I could find nothing presenting. I may here mention that upon bi-manual examination the enlarged uterus seemed to have more of a soft feeling like a bag of bran than the firm resisting feeling of a truly pregnant uterus.

I now saw my patient from day to day until April the 11th, when the hydatid was expelled. The flooding continued at intervals, sometimes in small quantity, sometimes in considerable quantity, and sometimes absent altogether for as long a period as twenty-four hours, the hæmorrhagic discharge was not the thick red of normal blood, but seemed to consist more of the watery element of the blood. No portions of the hydatid escaped with the hæmorrhage, as sometimes happens in these cases, and thus rendering the diagnosis easy.

The enlargement of the uterus was very rapid, reaching at the time of the expulsion of the hydatid as high up as an inch above the umbilicus, and measuring two inches in its transverse measurement. During the progress of the case I observed that the uterus was not steady in its enlargement, some days being somewhat reduced in size, and the next being again enlarged, this temporary reduction in size corresponded to the times when the flooding was most severe.

The pain at no time amounted to anything except at the termination of the case, when uterine action set in to expel the contents of the uterus.

The nausea was at times very severe. My reason for not exploring and emptying the uterus at an earlier period, was the fact that at no time did the life of the mother appear to be in jeopardy.

The point at issue here was the diagnosis. From my experience of this case, I would esteem the very rapid enlargement of the uterus, its soft and somewhat pulpy feel, and character of the discharge as very valuable signs in aiding me to a correct diagnosis of a similar case.

## ON THE TREATMENT OF THE PERINEUM IN THE SECOND STAGE OF LABOR AND POST-PARTUM.

By WALTER P. MANTON, M.D., of Detroit.

From the *Detroit Lancet*:—The advisability of interfering with the perineum during delivery is not conceded by all writers on obstetrics, although the majority favor some one of the methods called "support."

One prominent authority says that he was "long ago led to condemn support of the perineum as irrational and useless in all cases, and undoubtedly hurtful in some."

The delightful way in which this writer leaves everything to nature, reminds one of the excellent story told by Dr. Fordyce Barker of a teacher of midwifery, who was lecturing by the bed-side of a woman in the last stage of labor. "He said that he had never known a case of severe laceration of the perineum, except where it had been *well* supported. His experience," continued Dr. Barker, "was then and there somewhat enlarged, for, while he was yet talking, the woman had a severe pain, by which the head was delivered, and it was found that the perineum was torn down to the sphincter ani."

Without attempting to discuss the various methods now in vogue, and each of which has its merits, the method which I am convinced meets the requirements of every case, is the following, and which is essentially that proposed by von Ritgen:

The patient is placed on her left side, the left leg somewhat extended, and the right flexed, and supported by a pillow between the knees, or, better still, by the nurse. The accoucheur then seats himself on the edge of the couch and goes with his left hand over the patient's abdomen and between the thighs, so that the ends of the fingers come to rest upon the advancing head of the child at the vulvar ring. The accoucheur's right hand, holding the thickness of a napkin, towel, or sheet, is then placed over the anal region, but not upon the distended perineum,—that is, upon that portion included between the anterior border of the anus and the fourchette,—in such a manner that the thumb is to the woman's right, the fingers left, while the space between thumb and fingers presses behind and against the anus. The perineum, or at least that portion between fourchette and anus, is thus kept free, enabling the accoucheur to detect at once threatening or beginning laceration.

With that portion the coccygeo-anal space between the thumb and fingers the head is pushed forward toward the pubic arch during a pain, thus relieving the severe pressure upon the perineum, while the fingers of the left hand keep the head from advancing too rapidly.

When the pains are feeble and the head at the point of expulsion but sticks, two fingers of the right hand may be introduced through the anus, and the head pushed or lifted out during the interval of a pain.

As the biparietal diameter of the head distends the vulva the woman is told to talk or scream, but on no account is she to hold her breath and bear down. With the right hand the head is now, in the interval of a pain, pressed forward, and the perineum swept carefully backward over the face. It is precisely at this point that rupture oftenest takes place, and great care must therefore be exercised. If the mucous membrane break at any point along the distended perineum, and a tear seems inevitable; if the perineum appears very thin, and, as experience alone will teach, will split in spite of the most careful manipulation;—or if the skin between the anus and fourchette becomes edematous, and a central, or complete rupture is to be feared, —then a resort to episiotomy should be had at once.

At all times the fingers of the right hand are more or less free and can gauge the tension of the vulvar outlet, so that it is quite easy to determine at any time during delivery whether episiotomy is necessary or not.

Small cracks and slight tears passing but a short distance beyond the fourchette need little or no attention, except cleanliness.

The great objection to the immediate operation is stated by Dr. Thomas. "There are," he says, "three circumstances which tend to defeat the success of immediate operation. First, it is often performed by one not habituated to its performance; and, being practiced upon a woman who, having just been delivered, is exposed to the danger of post-partum hæmorrhage, and surrounded by anxious friends, it is likely to be finished too hastily.

"Second, the lochial discharge, constantly passing over the lips of the wound, is very likely to enter and prevent union.

"Third, the operator, having been taught to regard the perineum as the superficial layer of tissues intervening between the fourchette and anus, closes this by correspondingly superficial sutures, leaves the upper portion of the perineal body open, creates a pouch for the accumulation of putrefying materials, and leaves the anterior vaginal wall and bladder without support in the future.

Yet if the operation is carefully done a large percentage of cases heal by first intention.

For the operation the patient should be placed on the left side, within three hours from the time of delivery, the upper buttock gently raised by the nurse, and the parts thoroughly cleansed with bits of cotton wet in carbolic lotion. Rugged edges should be trimmed with the scissors. The sutures should be deep, so that not only the edges of the wound may be approximated, but that there may be no pouch left in the deep portions of

the wound for accumulation of lochia and secretions. The whole surface may then be dusted with iodoform.

Almost any kind of sutures may be used, from pack-thread to silver wire. In the little experience which I have had in the immediate operation, I have used silk sutures with the best results.

The advantage of the immediate operation seems to me to be three-fold.

(1) It is undertaken at a time, when, as a rule, the parts can be brought together accurately without refreshing. (2) The parts having been benumbed or partially paralyzed by the pressure of the presenting part, the operation can, in most cases, be undertaken without an anæsthetic, the pain suffered by the patient being but trifling. (3) By the immediate operation, if successful, the laceration is protected from the lochial discharge, etc., and if unsuccessful, no harm has been done, the conditions remaining the same.

After the first 48 hours the hot douche should be used, not only for the sake of cleanliness, but to promote the involution of the parts.

I cannot close this paper in more fitting words than those uttered by Dr. Thomas in his late address to the American Gynecological Society: "When it shall become the duty of the obstetrician, as it surely soon will do, under the influence of advancing knowledge, before relinquishing the care of the recently delivered woman, to inform himself thoroughly as to the existence of laceration of the cervix and perineum; when the false and vicious doctrine of underrating and ignoring these grave accidents is silenced forever; and when a neglect of their early repair by surgical resort shall be regarded as a flagrant obstetrical dereliction, then the number of women affected by pelvic disorders will become suddenly and wonderfully diminished."

#### THE MANAGEMENT OF THE THIRD STAGE OF LABOR.

PROCHOWNICK (*Centralblatt für Gynæcologie*) says:—Immediately after the birth of the child the flat hand is laid upon the woman's abdomen, and, after the lapse of a few minutes, slight friction is made upon the fundus for the exciting of energetic after pains. After the third uterine contraction has taken place, he asks the patient to flex her lower limbs, placing the soles of her feet against the foot-board, and make an expulsive effort, which in primiparæ raises the accoucheur's hand, which frequently in the parous sinks down between the recti muscles, that have been separated by pregnancy. If the placenta is not expelled, this must be repeated once or oftener, even to the seventh contraction. He stated that in only one case did he have to wait longer than the seventh contraction. He is favorable to the use of ergot at the close of, or just after, the second stage of labor.

We believe the hand which is applied to the abdomen should not be flat, but concave—the manual concavity fitting to the uterine convexity—for then the uterus is defined, limited, a larger surface embraced, and any relaxation of the organ prevented, or at once recognized and remedied. Besides, a flat pressure, acting only upon the anterior wall, may, if this be greatly relaxed, so depress it as to prepare the way for uterine inversion. Certainly the part of Prochownick's plan which makes the woman a voluntary participant in the expulsion of the placenta, is good.—*Medical News*.

#### A DOUBLE UTERUS WITH A FŒTUS IN EACH.

Dr. E. W. LANE, Scarboro, Ga., reported to the Med. Ass'n of Ga. (*Atlanta Med. and Surg. Jour.*) a case of double uterus each containing a fœtus. The woman was primipara, healthy and robust, and 35 years of age. She was in labor nearly four days. One child was delivered by the feet on the third day and was stillborn. On the following the other child was delivered after puncturing its head, it being evident that it was dead. Each placenta was attached to the right side of its uterine cavity; one placenta was adherent. The woman made a good recovery, and in the usual time.

ON THE USE OF THE OBSTETRICAL FORCEPS AS A SPECULUM  
AND PROTECTOR TO THE VAGINA IN OPERATIONS  
UPON THE FÆTUS IN UTERO.

By Drs. JAS. PRICE and G. G. FAUCHT.

From the proceedings of the Philadelphia Obs. Soc. :—Even a casual observance of the records of gynecology shows them bescored over and over again with cases, the sad history of which is the result of the reckless and unintelligent use of the obstetric forceps. The late Dr. John S. Parry gives the mortality of craniotomy as 37½ per cent. According to Dr. D. H. Agnew, *Surgery, Vol. II., page 821*, a "fatality quite as great as that resulting from Cæsarian Section." As a careful perusal of the writings of Schroeder, Tait, and others shows how often this operation when styled "successfully done" is followed by genital fistulæ, extensive sloughing and cicatricial contraction, we have good reason to believe that mutilations and contusions of the soft parts are no mean factors in accounting for the heavy mortality. Foreign reports indicate that the mortality is much greater abroad than in this city. A celebrated New York teacher, who boasts "three thousand cases and a year at Vienna," records one of his cases in which the cephalotribe slipped eight times, the operation being completed with a blunt hook. Cases are known in which the cervix has been entirely cut away, and in which in trephining the base of the child's skull the mother's sacrum has been sawn into. With such records before them, the writers feel that no apology is needed for presenting for the discussion a new and wise use for the forceps as a protector of the soft parts and for fixation of the head during operations upon the fœtus. A justly celebrated writer and teacher of this city, after the publication of a paper, advocating this measure, in the *Medical News*, August 2, 1884, called attention to the fact that the idea was not a new one, as shown by an abstract from *Blundell's Principles and Practice of Obstetrics*, published in 1834. The writers are well aware that obstetrical works report cases in which the head was perforated after ineffectual traction had been made with the forceps without removing that instrument, and the delivery subsequently accomplished safely. *Hodge Syst. Obst.*, pp. 252, 272, &c. Their use in these previously reported cases was, however, clearly accidental. The design of this paper is to claim the *intentional* use of forceps as a protector of the soft parts of the mother and for fixation of the head. The only previous intentional use of the forceps in such manner, known to the writers, was some years ago by Dr. DeForest Willard, a member of this Society. In using the forceps after the manner referred to in the title, when the destruction of the fœtus is already indicated, a pair of forceps as wide in the blades as the diameter of the pelvis will permit, are applied in the ordinary way, and used for fixation and compression of the head while the vault is being perforated and broken or folded up, the retraction of the tissues by the instrument allowing safe and expeditious work. If preferred by the operator, the blades may be separated to their respective sides of the pelvis and held by assistants, recovering and locking them to make compression and traction. To represent the utility of the forceps under such circumstances, we cite the following cases:

The Hodge and Davis forceps were used in five of the operations, in the last two a special forceps, designed by Dr. Price and made for him by Mr. Kolbe, having the following peculiarities: (1) Thin flat blades, one and three-quarters inches wide, to allow easy application in markedly deformed pelves. (2) The Hodge angulation for use at the superior strait. (3) The absence of fenestræ to increase the strength of the blades for powerful compression and traction and to afford more ample protection in operative procedure during perforation. (4) A greater cephalic curve so that the points come in apposition to prevent slipping. (5) A screw at the end of the handle to cause greater compression than could otherwise be ascertained.

Dr. Beates also exhibited another pair of forceps designed by Dr. Price, one blade of which terminated in a thin, flat, sharp-pointed perforator; this was screwed with a leather shield to protect the soft parts during its intro-

duction; this shield is not removed, but the perforator cuts through it when it is pressed firmly against the fetal cranium. The other blades terminated in a blunt screw, which is intended to be screwed into the spinal canal of the child for traction.

### PREGNANCY AND LABOR COMPLICATED WITH FIBROIDS.

Dr. JAMES R. CHADWICK, of Boston (*Boston Med. and Surg. Jour.*), reports cases and gives the following deductions, which do not make a part of the doctrines hitherto prevalent upon the subject:—

As aids to *diagnosis*, the following points should have great weight:

- (1) An area of flat percussion beyond the limits of the tumor or tumors.
- (2) Unduly rapid growth of a fibroid.
- (3) Blueish discolorations of the vaginal entrance.

As to *treatment*:

- (4) That intra-uterine disinfectant douches should be administered throughout the puerperal period in all cases, even before the supervention of symptoms.

As to *prognosis*:

- (5) That fibroids are, as a rule, absorbed during involution of the uterus or soon after.

### EXTRA-UTERINE FŒTATION TREATED BY ELECTRICITY.

By WILLIAM GARDNER, M.D., Prof. of Gynecology McGill University.

From the *Canada Med. and Surg. Jour.*, Aug., 1885:—Dr. Gardner reports a successful case with the following remarks: Mrs. —, æt. 38, married 19 years, four pregnancies all to full term, natural labors, slow recoveries.

That the case now related was really one of extra-uterine fœtation can, I believe, admit of no doubt. The history, symptoms, the suspicions of the patient, the result of pelvic examination, the results of treatment, and, lastly, certain events after the use of the electricity, particularly the labor-like pains, hæmorrhage and expulsion of decidua, combine to form a mass of evidence which cannot be controverted. The induration of the mass was perhaps exceptional, but easily enough accounted for by peritoneal and cellular inflammatory thickening. Also there does not seem any reason to doubt that it was (at least primarily) the relatively common tubal variety. The history and previous symptoms further show that the case is no exception to the rule that extra-uterine pregnancy occurs in women advanced in sexual life who have hitherto been sterile, absolutely so, or for a long term of years, and have suffered from pre existing uterine disease. It is more than likely that there was chronic disease of the Fallopian tubes, with its obvious predisposition to the condition.

Extra-uterine pregnancy justly excites much interest in the medical mind. Within the last five years this interest has become more intense. This is due mainly to the success of certain modern methods of treatment. I have alluded to the difficulties of correct diagnosis. But it is, indeed, doubtful if it be much more difficult to diagnose extra- than intra-uterine pregnancy during the first three months.

The treatment of extra-uterine fœtation by electricity and other agents which have for their object the death of the fœtus, to be successful, must be employed early, preferably between the second and third month, otherwise the fatal rupture so often occurring at this period may not be anticipated. Hence the importance of early diagnosis. Failure to diagnose the condition is doubtless sometimes due to an impression in the professional mind that the condition is extremely rare. This is erroneous. Dr. Garrigues of New York, while preparing a paper on the subject for the American Gynecological Society three years ago, read the reports of 200 cases all published within four years. In January, 1885, Thomas reported to the New York Obstetrical Society his thirtieth case. It is, of course, uncommon, but, compared with many other abnormalities of gestation, it is not so very rare.

To Dr. J. G. Allen of the United States we owe the successful employment of the faradic current in extra-uterine pregnancy. His first case occurred in 1869; the second in 1871. Since then, and especially during the last five years, a goodly number of successful cases have been reported, especially in the United States. The galvanic current, applied by puncture and externally by interruptions, has also been successfully employed, but it is more troublesome by whatever method selected, and no more efficacious than the induction apparatus. The dangers of puncture, from inflammation, and suppuration of the sac are such as to render it, in my opinion, quite unjustifiable. The Barnes', father and son, in the first volume of "Obstetric Medicine and Surgery," published in 1884, dismiss it with a notice of a line and a half, giving it no prominence; on the contrary, rather advocating tapping of the cyst with the aspirator needle in preference to any other treatment. A great merit of the faradic current is that it is so easily applied as to be within the capacity of the merest tyro in the therapeutic use of electricity. Another great advantage is, that if unsuccessful, it can do little, if any, harm. In case of mistaken diagnosis, if the pregnancy be uterine, the worst result is abortion. Such an occurrence cannot be admitted as an argument of any weight when the probability of the existence of so grave a condition as extra-uterine foetation is great. The other great step in the treatment of extra-uterine pregnancy is an outcome of the rapid progress of abdominal surgery, and is one of Mr. Lawson Tait's many contributions to that department of surgery. It is for the most part applicable to cases in which suddenly occurring and urgent symptoms of rupture and hæmorrhage are present. It consists in abdominal section, removing the foetus, clots, etc., ligating the affected tube, and then excising it. The indications then in the treatment of extra-uterine foetation when diagnosed during the first four months seem clear. If no evidences of internal hæmorrhage be present, the induced electric current is to be used with the object of killing the foetus. If rupture have occurred, however desperate the symptoms, the belly is to be opened, and the bleeding point having been secured, the cavity is well sponged out and drained before being closed.

#### THE TREATMENT OF MASTITIS BY REST AND PRESSURE.

By W. F. MILROY, M.D., Late House-Surgeon to Maternity Hospital, New York City; Prof. of Histology and Pathology in the Omaha Medical College, Omaha, Neb.

From the *Medical Record*, Aug. 8, 1885:—My method is as follows: A piece of strong muslin is used, fourteen to sixteen inches in width, and of a length sufficient to reach around the thorax of the patient and overlap a few inches. The patient lies upon her back with the arms elevated so as to clasp the hands above the head, thus drawing the axillæ well upward. One end of the muslin is slipped through beneath the patient, and the two ends made to overlap exactly as in the application of an abdominal binder. A pad of cotton wadding is placed between the breasts to serve as counter-pressure. The breasts are then pressed upward and toward the sternum by an assistant, and the muslin is fastened by pins, which are placed along the middle line about three-fourths of an inch apart. As the pins are put in place, the bandage is drawn tense by about all the force one can comfortably exert through his arms.

When the bandage has been fastened, proceeding in this way from above downward, it will usually be found that its upper part is comparatively loose, and a few pins should be removed and reapplied. The bandage should be brought well up against the axillæ, and thus the upper part of the breast will all be included within it. When it is in place, a small wad of cotton should be tucked in beneath the folds of the axilla above the bandage. This will relieve all feeling of irritation from the bandage in that location. A small hole should then be cut with a scissors over the nipple of the sound side, and the child allowed to nurse this breast. The one principle to be borne in mind in the application of this bandage is to make sure

that every part of the breast is included in it, and that the pressure is even throughout. With reasonable care this is easily accomplished. In case the trouble occurs long enough after confinement, so that the patient is out of bed, a strap of muslin may be passed over each shoulder and pinned to the upper edge of the bandage, before and behind. This will overcome any tendency toward slipping down. If the patient is in bed this is wholly unnecessary. The bandage having been once applied need not be removed until the unpleasant symptoms are entirely gone, but may be tightened above and below, as the diminishing size of the breast will permit.

It will be observed that the most essential point of difference between this treatment and that of Dr. Harris consists in the employment of firm pressure, instead of the slight pressure which he recommends. This I consider a positive advantage. In cases in which the mastitis had progressed so far as to produce an area of bright redness and induration, and so sensitive that the most careful handling produced severe pain, strong pressure made after this fashion gave immediate relief. I have never been able to pin a bandage so tightly as to increase the pain, provided it was evenly applied.

#### PUERPERAL CONVULSIONS WITHOUT ALBUMINURIA.

Dr. N. VUCCINO, of Rodosta, writing in the Constantinople *Gazette Médicale d'Orient*, gives the case of a lady usually enjoying excellent health, except for occasional hysterical attacks, who in the fourth month of her first pregnancy was seized with a severe frontal hemicrania of quotidian type. At the end of the sixth month she was awakened one night with intense pain in the head, followed by a slight convulsion affecting the upper extremities. In the morning the writer found her suffering from general convulsions, consciousness being lost, and a bloody froth issuing from the mouth; the pulse was small and hard; but the urine was then, and continued to be, perfectly normal. Various methods of treatment having proved fruitless, it was decided to bring on the labor; which was done by injecting hot water (32°). After this had been continued for three hours and a half, the os uteri became fully dilated, and a dead child was shortly afterward expelled. The convulsions ceased as if by magic, and in twelve days she was able to resume her household occupations. She afterward enjoyed good health till the eighth month of her second pregnancy, when convulsions reappeared with greater intensity than before. Chloral and chloroform proving inefficacious, the continual hot vaginal douche was again employed. In consequence of the irregularity of the contractions of the uterus, forceps were required. The convulsions ceased five hours after delivery, and in seventeen days she was again in her normal condition. She subsequently became pregnant for the third time, and during the second month suffered from some premonitory convulsive symptoms, which were increased by vaginal examination; these came to an end on the patient, aborting. The author considers the case interesting, as showing how convulsions, due, as he believes, to a highly nervous condition of the uterus, may simulate those connected with renal and urinary mischief.—*Med. and Surg. Reporter*, Aug. 22, 1885.

#### PROPHYLAXIS OF OPHTHALMIA NEONATORUM.

Dr. WALTER P. MANTON, of Detroit, Mich. (*Boston Med. and Surg. Jour.*, Aug. 13, 1885) says:—The perfect results now obtained by Credé's method, make it obligatory in every lying-in institution to adopt this treatment. And, as the disease is also met with more or less frequently in private practice, no physician should consider his obstetrical armamentarium complete without a small bottle of a two-per-cent. nitrate of silver solution. And in every case where there is a history of specific disease, or leucorrhœal or other discharge from the genitals during pregnancy, it should be the care of



the accoucheur to see that the child's eyes are properly treated prophylactically. The *modus operandi* is so simple that it requires no experience or training in its carrying out. After the bath the child's eyes should be wiped with a bit of cotton or linen rag wet in clean water, every particle of smegma, etc., being thoroughly removed. The lids should then be carefully separated by the thumb and fore finger of the left hand, while with the right a single drop of the silver solution is allowed to fall from a glass rod into the middle of the cornea. With a clean bit of rag wet in water, the eyes are again wiped and dried. Further treatment there is none. It is well to see that the tip of the glass rod is smooth and rounded so that if coming in contact with the cornea, it can produce no injury.

#### DRUNKENNESS AT THE TIME OF CONCEPTION; ITS INFLUENCE ON PROGENY.

The *New York Medical Abstract* quotes the *Journal de Médecine et de Chirurgie* as follows: "In a very remarkable work on alcoholism, Dr. Lentz de Tournai finds this question the most difficult to solve of all the many problems connected with alcoholic intoxication, on account of the infinite shades of difference which arise between two factors—the wholly transient state of drunkenness, and that permanent condition brought about by more frequent, though still transitory, intoxications. Demeaux is one of the very few writers who have made a careful examination of the question, and from the cases he succeeded in bringing together he felt justified in the general conclusion that drunkenness in the parents at the time of conception is one of the principal causes of the nervous affections which often beset the new-born child. He also finds that the intelligence and moral senses of such progeny are tainted with the influence of the vicious habit. The child born of parents who were in a state of alcoholic intoxication at the moment of conception is ordinarily carried off by convulsions or other nervous troubles. If it lives at all it remains in a condition of epilepsy, idiocy or imbecility, and has a tendency to indecency, immorality, and general depravity. As an adult he has an aspect peculiar to the diathesis; his head is small, his physiognomy hebetudinous (*hébété*), and his gaze stupid and expressionless. M. Lentz does not fully accept Demeaux' conclusions except so far as they may be correct in cases of fully commenced alcoholism, rather than in episodic drunkenness. He points out the curious fact that the first-born child is usually—among the working-classes at least—conceived while its parents were more or less under the influence of alcoholic drinks. Indeed, it is rare among these people to see a wedding repast at which the newly married man is not acutely affected by alcohol. Yet we do not observe, he says, that the children of workmen are more liable to suffer from hereditary evils than those born afterward. Still, the question is an open one. Certain it is that history and tradition present some ideas and facts which cannot be ignored in the consideration of this matter. Even mythology incorporates the idea that evil results from toxic conceptions. M. Lentz remembers that the lame Vulcan was conceived whilst Jupiter was intoxicated with nectar. He also cites some of the more prominent facts of history concerning this matter as showing the general consensus of the ancients respecting it. "Young man," said Diogenes, to a stupid child, "thy father was drunk when thy mother brought thee into the world." Aristotle believed that a woman given to drunkenness would engender drunken children, and Plutarch affirms the same thing. The legislation of Lycurgus favored drunkenness in his conquered tributaries in order to stifle their aspirations and develop in them and their descendants such instincts and appetites as would tend to keep them slaves. In Carthage the laws forbade the drinking of anything but water on days of intended marital cohabitation. Hippocrates himself signalized the unfortunate effects of drunkenness at the time of conception."—*Weekly Med. Review*.

### ACCOUCHMENT BY FIRE ARMS.

Dr. GRANIER, surgeon in the French army, writes from Algeria: "A few days after the occupation of Brizerte, when the military authorities had forbidden, under the severest penalties, the discharge of firearms within the town, the whole garrison was awakened at three o'clock one morning by the tremendous explosion of a heavily loaded gun in the neighborhood of the ramparts; a guard of soldiers rushed into the house from whence the sound had come and found a woman lying on the floor, with a newly-born babe between her thighs. The father of the child stood over his wife with the smoking musket still in his hand, but his intentions in firing the gun had been wholly medical and not hostile to the French troops. The husband discovered that his wife had been in labor for thirty-six hours. Labor was slow and the contractions weak and far apart. He had thought it advisable to provoke speedy contraction, and following the Algerian custom to *scare the baby out*, he had fired the musket near his wife's ear; instantaneously the accouchment was terminated. After being imprisoned twenty-four hours the Arab was released.—*Journal de Médecine de Paris*.—*Cincinnati Lancet and Clinic*.

### SUPPORTING THE PERINEUM.

DEPAUL, in a lecture delivered at the Clinique d'Accouchements, Paris (*New York Medical Times*), made this statement: "I never support the perineum; I am contented with supporting the head of the fetus and preventing it from emerging too suddenly." Often, when the perineum has been supported, it has been found on withdrawing the hand that a rent has been made in the perineum by the hand itself. For this reason Depaul said, support the head but leave the perineum alone.

### GALCERAN ON UNCONTROLLABLE VOMITING IN PREGNANCY CURED INSTANTANEOUSLY BY ETHER-SPRAY TO THE EPIGASTRIUM.

A young and delicate primipara began at the second month to suffer from frequent sickness. Toward the fifth month, her state became alarming from the malnutrition caused by the uncontrollable vomiting. No drugs were of any avail. The application of ether-spray to the epigastrium was tried, with immediate benefit. After the application the sickness ceased. Sometime afterward it occurred again, and again yielded to the spray.—*London Medical Record*.

### MORPHINE IN EXTRA-UTERINE PREGNANCY.

Dr. RENNERT, of Frankfort-on-the Main (*Pacific Medical and Surgical Journal*) destroys the fifth month fetus by injecting with a hypodermic syringe one grain of morphine into the fetal head, through the abdominal wall of the mother.

### DISEASES OF WOMEN.

#### ALEXANDER'S OPERATION FOR RETROVERSION OF THE UTERUS.

By W. M. POLK, M.D., Prof. of Obs. and Diseases of Women and Children in the Univ. of the City of New York.

From the *Phil. Med. Times*, Aug. 23, 1885.—A word with regard to the operation itself. In the first place, as to the ease with which you can reach the external ring, nothing is simpler to do than this in the male. You have the cord and its accompanying vessels, which are so prominent that a mere

tyro in surgery can reach the ring. But when you come to search for the external inguinal ring in the female, you will find that it is by no means so easy a matter. You know that the ring is immediately above and a little outside of the spine of the pubis, and that when the round ligament passes through this it becomes speedily lost in the connective tissue where the labia majora joins the mons veneris. My directions to you, then, in the performance of the operation would be to make a free incision just a little above and to the outside of the spine of the pubis; go down through the skin and superficial fascia until you strike the conjoined tendon. Having done that, you know you have reached tissue which goes to form the external ring, and it will then be a very simple matter to run your finger along this smooth surface down to the pubic spine, and the moment you reach this point you will feel the hardened, curvi-linear edge of the external ring above and outside the spine.

If you attempt to determine the location of this ring, as has been advised, by invaginating the loose skin lying over the labia majora, following out the plan which we adopt in locating the ring in the male, in which case we invaginate the scrotum, you will find that the tissue is not sufficiently loose to permit you to thrust your finger in far enough to reach the ring. But clear away the skin, adipose tissue, and superficial fascia down to the surface of the conjoined tendon, and you will find it just as easy to mark the edges of the external ring in the female as in the male.

Having exposed the external ring, you must not expect to find the round ligament a distinct, well-marked, fibro-muscular band within its limits. You will find that the tissues all look very much alike, especially if you have permitted them to become blood-stained; but in the centre of the ring, passing directly beneath the arch over the canal, you will see some tissue resembling unstriped muscular structure, which is vascular intermixed with fat. Take your forceps, grasp this tissue, make traction upon it, and you will bring the cord into view. It is really the extremity of the cord, which is made up of this muscular tissue, fat, connective tissue, and the extremities of what corresponds to the cremasteric artery in the male. Having made traction upon this tissue and brought the cord into view, you will be able to shorten it sufficiently to raise the uterus.

I am particular in describing these steps in the operation, for the reason that the directions which have been given heretofore for the performance of the operation are not sufficiently clear to enable one to do it readily.

## CANCER OF THE UTERUS.

By WILLIAM GOODELL, M.D., Prof. Gynecology in the Univ. of Penn.

From a clinical lecture published in the *Med. Bulletin*, Aug., 1885.—The patient was 39 years of age, had had five children, the youngest eleven years of age.

There are three forms of cancer which may attack the uterus—scirrhus, epithelioma, and encephaloid, but there is no doubt that they merge one into the other. The practical question is not so much is the tumor scirrhus, epithelioma, or encephaloid cancer, as it is a question whether or not the growth is malignant. There is only one thing about this differentiation, and that is that epithelioma is more amenable to treatment than either of the other forms. In the vast majority of cases, when cancer attacks the uterus it takes the form of epithelioma. There are some cases which seem to begin as scirrhus, and ultimately break down into the epithelial form.

There are certain popular fallacies about cancer of the uterus. One is that it is always accompanied with pain. Carcinoma of the neck of the womb does not usually produce more pain than most women experience at each period. It is only when the disease advances toward the internal os that pain is felt. When it ascends and invades the cavity of the womb the woman's sufferings are very great. You see in our practice in the dispensary

the same thing. We hook tenacula into the cervix and apply powerful caustics without eliciting any sign of pain. Under some circumstances, just as cartilage, which is normally insensible, may become excessively tender, so the cervix of the womb will, under certain circumstances, become very sensitive, and the slightest touch will cause the patient to flinch, but, as a rule, in cancer limited to the neck of the womb there is no pain. There may be leucorrhœa, and that will certainly be if there is an open sore. This is a very common delusion. Over and over old physicians have said to me, "Oh, no, Doctor, it cannot be a cancer, there has been no pain." The idea of cancer is associated in their minds with lancinating pain, which cuts like a knife. When carcinoma invades external portions of the body which are well supplied with nerves these pains are present. The sensitive portion of the womb begins at the internal os, and the lining membrane is very sensitive.

I can give you a good idea of the insensibility of the cervix by relating a little incident which happened to me. I had operated on a delicate, refined lady, under ether, and removed a cancer of the cervix. A week or two later I found a point which had not perfectly healed, and I decided to apply the cautery. I said nothing to her, but had the assistant work the Paquelin cautery at the foot of the bed, where she could not see it, and I applied the hot iron to the raw surface. She did not feel it, and wondered where the smell of burning flesh came from.

Another fallacy is, that there is in every instance the cancerous cachexia. This is a great mistake. My impression is that one-half of the cases which come to me do not present the cancerous cachexia. Instead of being lean, bony, and scrawny, with the leaden hue of the countenance, many of these cases present a buxom appearance, with rosy cheeks. It is my experience that such cases are less amenable to treatment, and operation is less liable to be followed by temporary benefit than in those cases which present the appearance of the patient before us. In our patient, if the disease were limited to the cervix, I should expect that the operation would do a great deal of good. Remember, then, that cancer of the uterus may exist without pain, and may appear in a woman with a blooming complexion.

Again, cancer may exist without bleeding. Before ulceration occurs it is not present, and even in the vegetating form it may be absent, although there is usually some discharge. This discharge need not be offensive, and this is another point which it is well to bear in mind.

I wish now to give you a little history of this case. She comes from a distance, and was brought here by her husband in great distress of mind. She had been told that she had a cancer. My own rule, to which exceptions are very rare, is never to tell a woman that she has a cancer. I speak of it as a bad ulceration. Many of my patients have known in their hearts that they have a cancer, and know that I know it, and yet the word "cancer" never passes our lips. Many women say to me, "Now, Doctor, if I have a cancer do not tell me." I advise you to adopt the rule which I follow. I do not want you to lie about it, but never tell a woman that she has a cancer if you can get out of it.

This woman came in a very painful state of mind. As a drowning man will grasp a straw, so she was willing to embrace anything that might do her good. She tells me that she has five children and cannot bear to think of leaving them. I said to her, "While I cannot cure you, I may be able to do something which will do you a great deal of good." She jumped at the idea, and I have not disillusionized her. She thinks that I am going to do more than I can do.

When I examined her, I found a great excavation. What I thought of doing was to scrape off the vegetations, and, if I dared, cover the part with nitric acid, but a symptom has appeared which shows that the disease has attacked the bladder, and I can do nothing for her. Three days ago she began to pass blood from the bladder. The urine does not trickle into the vagina, because there is no opening as yet, but the disease has involved the bladder, and in the course of a few days the tissue will break down, and there will be produced a vesico-vaginal fistula, through which the urine will trickle into the vagina.

There is still one other thing. That woman has not long to live. My honest belief is that she will not see many weeks in the new year. Her sufferings will, I think, be excruciating. She ought to have as much opium or morphia as will make her comfortable. Some would object to this, saying that she would get into the opium habit. She will not live long enough to contract the habit. I say let us make the last end of her life as comfortable and peaceful as we can. Give her opium in any form or amount that she chooses to take it, exercising a little restriction in the beginning.

### INTRA-UTERINE MEDICATION.

By J. ALGERNON TEMPLE, M.D., M.R.C.S., Eng., Prof. Obs. and Diseases of Women and Children, Trinity Medical College, Toronto.

From the *Canada Lancet*.—For the successful application of any remedy it is necessary that the cervical canal be sufficiently patulous to allow of the easy passage of a probe, armed with cotton wool, and saturated in the remedy, to pass through into the uterine cavity. In the diseases to which I have just alluded such is generally the condition, but if not it must be dilated first. Secondly, all mucous secretion should first be carefully removed from the uterine cavity so as to enable the remedy to come into direct contact with the diseased surface. And thirdly, no uterine inflammation or tenderness in the surrounding vicinity of the uterus should exist. First remove such tenderness by leeches, scarification, hot vaginal douches and rest in bed, and glycerine pads, and then proceed to treat the cavity.

As to the frequency of these applications, I think once in four or five days for the alterative and astringents is enough, once in ten or fourteen days enough for the caustic ones. After the application the patient had better, as a precautionary measure, remain quiet for a couple of hours on her bed, though I am constantly in the habit of making such applications in my own office. For my own part I never saw an accident occur. I know it is reported that fatal peritonitis has followed this plan of treatment, and I am inclined to attribute such an unfortunate accident to the fact that the case was badly selected, that some low inflammatory state existed and was not detected, and that the case was not a suitable one. The remedies used are not many; some recommend them in powders, some in ointment, some inject them, while others again apply them by means of a Playfair probe dipped in the desired fluid; this latter is to my mind the best. I do not like the way of injection. I once or twice used that plan but gave it up long ago on account of severe constitutional disturbance. The remedies I most commonly use are carbolic acid (Calvert's No. 5), Churchill's iodine, iodized phenol, iodoform, nitric acid, and nitrate of silver. Undoubtedly many more might be added. The ones I mostly use of this list are carbolic acid and iodized phenol.

*Nitric Acid* is the strongest of them all, and should only be used for certain diseases; it is especially useful in the treatment of uterine fungosities, that sometimes obstinate disease to treat. Firstly having dilated the cervix if requisite, and carefully scraped the whole surface of the uterus with the blunt curette, and then carefully wiped out the cavity, pass an armed probe previously dipped in the strong nitric acid through a cervical speculum into the uterine cavity. It is very necessary to use this useful little instrument so as to protect the cervical canal. The vagina should likewise be protected by absorbent cotton dipped in a solution of carbonate of soda. The application of this remedy to the uterine cavity is not painful nor have I seen any bad results ever follow its use. The patient should be kept quiet for two or three days in bed, and the remedy should not be applied again for ten or fourteen days.

*Carbolic Acid*.—This is a most useful remedy and one which I use largely. I find it especially useful in cases of uterine catarrh, and also in cases of tenderness of the inside of the uterine cavity. I am likewise in the habit of swabbing out the uterine cavity with this remedy after using the curette. Its action is slightly caustic and astringent and alterative.

*Iodized Phenol.*—Until I learned the good effects of this preparation, I invariably used Churchill's tincture of iodine, but of late I have quite abandoned it for this preparation. It was first introduced into practice by Dr. Battey of Georgia, and is made of one part of pure iodine to four parts of carbolic acid. This agent is particularly useful in cases of uterine hemorrhage, profuse menstruation, the result of imperfect involution, accompanied by an unhealthy state of the lining membrane of the uterus.

Iodoform is used both in powder and crayons, but the author has not met with such good results from this remedy as to induce him to resort to it frequently.

*Nitrate of Silver.*—I have abandoned for safer and quite as good remedies. I have thus very briefly brought before your notice this mode of treating uterine disease, and you will gather from the foregoing remarks that, while I am a strong advocate for local medication, I do not exclude the great advantages to be derived from general constitutional treatment, nor overlook the fact that uterine displacements, fibroid tumors, and allied diseases must receive appropriate treatment.

### KRAUROSIS VULVÆ.

Prof. BREISKY, of Prague, in the *Centralblatt f. Gynaekologie*, applies the term "Kraurosis (shrunpfung'-shrinking) vulvæ" to a form of atrophy of the muco-cutaneous covering of the female pudendum. The affection, he says, has not been hitherto described, and there is nothing known regarding its course and termination.

Mr. Lawson Tait, noticing an abstract of this article in the *Medical Times and Gazette*, requests that journal to reproduce the following paragraphs from his book on "Diseases of Women," published in 1877.

"The nymphæ are also subject to a peculiar degenerative and atrophic change, which occurs only at or after the climacteric period. It is a very distressing complaint, and one of the most intractable with which we ever have to deal. It is very often, but by no means always, associated with vascular caruncle of the urethra, of which I shall speak further on. This affection has been alluded to by Simpson, and various other authors, but no description which I have seen includes all the facts that may be observed in connection with it. It is always confined, in my experience, to the mucous membrane of the inner surfaces of the nymphæ, and it is never met with in the labia majora, or in the vagina higher than the vestibule. It is a very frequent cause of the total suspension of marital intercourse, and is the real disease existing in a large number of cases of so-called vaginismus, a term which is widely used as a cloak to cover ignorance and carelessness. A patient suffering from this disease will nearly always be found to be over forty years of age, and she will state that she has a slight yellow discharge, a good deal of scalding when she passes water, and that she suffers excruciating agony on any attempt at intercourse. This latter is always the first symptom in date; and when a case comes under the notice of the gynecologist it will generally be found that intercourse has been discontinued for many months, if not for several years. The misery is very great, and a great deal of the climacteric drunkenness, too common among women, is due to this disease. When the labia are separated and an inspection made, one or two spots of redness on the mucous surface of the nymphæ will be observed, varying in color from a palish brick-red to a bright purple; and if these be touched they will be found to be exquisitely tender.

The disease is a progressive atrophy of the mucous membrane, the last textures affected being the blood-vessels and nerves; for, when the process has been completed, the pain ceases, the redness disappears, and nothing remains but a vestibulum vaginæ, so narrow that incredulity may be excused when the patient states that she has borne children. Great relief is obtained, though only temporary, by the application of strong carbolic acid to the red spots. The acid is a powerful local anesthetic, and it never fails to mitigate the tenderness for a time.—*Weekly Med. Review.*

## METRORRHAGIA.

By JAMES E. FREE, M.D., of Emporium, Pa.

From the *Med. and Surg. Reporter*, Aug. 8, 1885.—One of the commonest causes for metrorrhagia is exercised after child-birth. Subinvolution succeeds indiscreet conduct very often at this critical period, and the train of symptoms is as familiar as an old friend's face. Swelling, tenderness, pain in the pelvis and back, hemorrhage from the uterus, and jaundice, etc., etc., *ad infinitum*.

In such a case, the first thing to be done is to obtain rest.

If two important considerations are attended to—namely, rest and the exciting cause, half the battle is won; as soon as the roots of a tree are cut the trunk and branches wither, and if we are able to dam the fountain, the stream soon runs dry.

Nothing is so inspiring to a patient as to realize that the physician has a system about his management of the case in hand, and very few will remain intractable when they are given to understand that they must bear a share of the responsibility. It is well nigh impossible to get a sick person's mind off her disease for any length of time, but it is possible to rouse a sluggish imagination by giving them something to do which will appear to have a direct bearing on their case, and such a consummation is devoutly to be wished.

The physician who makes a clear diagnosis of metrorrhagia and at the same time recognizes the valuable assistance which rest is ready to lend him, besides seeing the cause for the disturbance of the uterine functions, is most likely to have at his command the means to accomplish a cure.

One of the most useful medicines in metrorrhagia is bromide of potash. None of the bright and shining lights of the profession have recommended its use so far as we know, but great men are not always discoverers; they sometimes swell to immense proportions on borrowed fame. Nothing is surer than the therapeutics of bromide of potash and ergot in cases where some of the trouble arises from a strained condition of the sensorium. Ergot, of course, is our sheet anchor, but it is not always the *sine qua non*.

We have before now succeeded in relieving a patient for a profuse hemorrhage by the use of morphia and bromide of potash: an overshadowing symptom in this case was cephalalgia, which yielded nicely in a few hours, and was shortly afterward followed by the disappearance of the metrorrhagia, but worse than either was the itching eruption which appeared and obstinately hung on for a month.

Neither ergot nor the bromides should be used for any length of time, on account of their well-known effect.

Gallic acid in combination with ergot is also reliable in metrorrhagia, but one objection, and a powerful one by the way, is its disagreeable taste. No better astringent can be found than gallic acid in some cases of hemorrhage. Viburnum has healing in its wings sometimes, but it is such a vile-smelling compound that we have abandoned its use wherever practicable. Quinine, ergotin, and ferri sulph. exsicc. with gentian, makes an excellent formula for pills to be used in metrorrhagia.

## THE THERAPEUTIC SIGNIFICANCE OF THE CERVICAL FOLLICLES.

By SIMON BARUCH, M.D., Gynecologist to the Northeastern Dispensary, New York.

From the *N. Y. Med. Jour.*—Summary.—1. A thorough knowledge of the anatomy, physiology, and pathology of the cervical follicles will simplify the treatment of many uterine affections.

2. The cervix uteri represents a large gland of active and important function in the various sexual relations of women.

3. In the majority of the more common diseases of the uterus the mucous membrane and its follicles play the most important rôle. A recognition of this fact will make treatment more successful.

4. Metritis, subinvolution, hyperplasia with catarrh, erosions, etc., must be studied in connection with the glands of the cervix.

5. In obstinate cases medicinal applications fail because the secreting surfaces of the follicles are not reached. Scarification and the curette are valuable adjuncts in nulliparous women or in parous women without cervix laceration.

6. In parous women with lacerations, trachelorrhaphy is the most valuable procedure. As a simple plastic operation it will fail. Success depends on extirpation of the follicles, which is more important than "removal of the cicatricial plug."

7. The microscope demonstrates the dependence of catarrh, ulceration, erosion, and hypertrophy of the cervix, and often also of the body of the uterus, upon the glandular structure of the cervix uteri.

8. The cervical follicles are significant as elements in the pathology of cervix cancer, because the microscope demonstrates the dependence of the latter upon erosions, which are based upon the gland structure.

9. Laceration and erosion must be regarded with suspicion, as possible sources of future malignant disease. In operating for their removal, extirpation of the cervical follicles must be unsparing.

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#### THE ADVISABILITY OF PERFORMING DOUBLE OVARIOTOMY WHEN THE DISEASE OF ONE GLAND IS BUT LITTLE DEVELOPED.

From an editorial in *Maryland Med. Jour.*, Aug. 22, 1885.—In performing the operation of ovariectomy, it happens in a certain number of cases that whilst cystic disease is so well pronounced in one ovary the other organ presents only a pathological state in its early development. When this latter condition is observed, a question must arise in the mind of the operator whether both ovaries shall be removed at one operation or whether the one least disturbed by pathological processes shall be left for a subsequent operation. The mortality from a double ovariectomy is undoubtedly larger than were a single ovary removed, as has been shown by the statistics of Sir Spencer Wells and Kœberle. The fact that the patient is rendered sterile by the removal of both ovaries is also a point to be considered. The many sides to these questions have been discussed, and a partial settlement seems to have been reached in favor of delay in removing the second ovary unless cystic disease is so pronounced in both ovaries as to make their removal a matter of urgent necessity.

Quite recently some statistics have been offered which seem entitled to consideration. In a paper entitled "Two Ovariectomies in the Same Patient" (*Med. News*, August 1, 1885), the author, Dr. Ransohoff, of Cincinnati, discusses the question which gives the title to this article. Dr. Ransohoff disputes the statement made by Scanzoni that in fifty per cent. of cases both ovaries are affected.

Dr. Ransohoff suggests that an examination of statistics will show that different operators are far from agreed as to what constitutes sufficient disease in the second ovary to call for its removal. It is the determination of this point which makes the decision a matter of practical difficulty at the time of operation. It is here that a strong judgment and an intelligent view of the conditions observed in the case will come to the material aid of the operator. The youth and conjugal relations of the patient present questions involving the propriety of removing both ovaries at one operation. Dr. Ransohoff's suggestion, "unless the less diseased gland be the seat of quite marked multilocular cystic degeneration, it would probably be better in many cases to leave it undisturbed or to empty the cysts of their contents," is worthy of practical consideration.

He has an eminent authority in Sir Spencer Wells in advocacy of this plan. Wells practiced on a girl of nineteen, from whom he had removed the right ovary. "The left ovary was enlarged to nearly double the normal



size. Two follicles, about the size of cherries, were distended by clot. These I laid open, turning out their contents. It seemed hard to unsex a girl of nineteen, and if the disease should progress, a second ovariectomy could still be done. This operation was performed in November, 1864. After her marriage the patient gave birth to four children, and when last heard from, in 1881, she continued in good health."

In thirty-two cases, collected by Dr. Ransohoff, in which the operation was twice performed on the same patient, children were borne by five of these cases. The aggregate number of children born between the two operations was fourteen.

Another important factor in favor of conservatism in dealing with a slightly diseased second ovary is the small mortality attending second ovariectomies. This mortality is estimated at about 12 per cent. Wells' experience shows a mortality of 34 per cent., whereas 51 per cent. in the cases reported by Kœberle have died. Dr. Ransohoff is very pronounced in favor of removing each ovary by a separate operation when the pathological condition of the ovary will admit of its retention. He concludes that double ovariectomy should be refrained from except in women approaching the climacteric, and unless the disease in the second ovary be quite pronounced.

#### McDOWELL'S FIRST OVARIOTOMY.

In the bleak cold of a December day, in 1809, a woman riding on horseback, arrived in Danville, Kentucky. She was to be the subject of an experiment—an experiment at the hands of a surgeon living on the borders of civilization—an experiment which would involve her life, and to which she must submit without the blessing of chloroform or ether. This woman, possessed of marvellous courage, was Mrs. Crawford, McDowell's first patient in ovariectomy, and the first patient upon whom the operation was ever deliberately undertaken. She recovered and lived to the advanced age of seventy-nine years, a period of thirty years beyond the operation.

The conditions surrounding, and forming part of this operation, are worthy of more than a passing notice. At the present time, they are declared by the ablest operators to be of more than accidental importance.

In the light of all recent advances concerning the environs of an ovariectomy patient, I ask you to listen thoughtfully, and inquire of yourselves: Have modern operators had better environment than McDowell? Is their quarantine better than his was? Whether accident, or necessity, or the simplicity of border life, provided these conditions as favorable to recovery, your orator will not inquire, but hopes to show that McDowell did operate under conditions as favorable as does Dr. Keith or Mr. Lawson Tait.

- 1st. The patient was refused operation in her own home.
- 2d. She was operated upon in Dr. McDowell's own house.
- 3d. History mentions but one assistant present at the operation.
- 4th. The patient had never been tapped.
- 5th. We may safely infer that the room in which the operation was performed, contained, at this early date in Kentucky, no superabundance of furniture or upholstery.
- 6th. That the room was ventilated by an open fireplace is more than probable.
- 7th. The atmosphere was that of a healthy border town.
- 8th. No sponges were introduced into the abdomen.
- 9th. He ligated the pedicle and dropped it in.

This operation will stand the criticism of the most exacting specialist of the year 1883, save in two particulars—viz., the ligature was not carbolized or scalded, the ends of it were left hanging out of the angle of the wound, and merely turning the woman on her side to permit all fluids to escape from the cavity of the abdomen was scarcely enough in that direction.

The incision was made to the left of the rectus muscle, but in his next case McDowell made it in the linea alba, between the umbilicus and pubis.

Pause a moment! Think; at the end of almost three-quarters of a century, the operation stands almost where McDowell left it, with one solitary exception—viz., the ends of the ligature surrounding the pedicle are cut short.—*Dr. Sutton, of Pittsburg.*

#### METHOD OF OPERATING UPON THE UTERUS, VAGINA AND VULVA.

Dr. GEO. J. ENGELMANN, of St. Louis (*Editorial, Weekly Med. Review*), says: Contrary to the almost universal custom in this country, I perform all operations upon the uterus, vagina and vulva, with the patient in the lithotomy position, the thighs thoroughly flexed upon the abdomen, the uterus drawn down and the parts perfectly exposed, not by tractors, the vulcellum or other forceps, but by thoroughly depressing the perineum with the short, broad and flat blade of a Simon's speculum, concave at its end, not convex like Sims' speculum; flat retractors are used upon either side, though this is not always necessary. The field being thus clearly exposed, the surface to be operated upon is continuously washed by a hot antiseptic stream; this douche, at a temperature of from 115 to 125 degrees, is rendered antiseptic either by carbolic acid, three per cent., or corrosive sublimate, one to two thousand; thus the knife of the operator is at no time interfered with by a flow of blood, unless a vessel spurts, and then it is tied. The blood oozing from the cut surfaces is washed away by the stream of water which must, of course, be properly directed and the field thus kept clear. A sponge is never used, hence a great deal of time is saved; the operator can continue his work, however great the oozing, or the venous flow may be; moreover, the surface is kept most thoroughly aseptic, and the loss of blood is greatly diminished by reason of the astringent effect of the hot water and the greater rapidity of operation. But few and the simplest of instruments are used; the simple scalpel and tissue forceps serving almost every purpose; at times only is the right and left angular knife used; but in place of the vulcellum forceps, the Schroeder forceps, with my modification, practically the American bullet forceps, is used, and this I regard a most important and valuable instrument in all gynecological operations; more certain, safe, and less injurious than the vulcellum forceps, it serves innumerable purposes.

♦The braided silk I invariably use for my sutures, and this I always have on hand ready for use, in a five per cent. solution of carbolic acid, in which it may be kept for months without injury. I rarely use any other than numbers five and seven, occasionally twelve, one for fine ligatures. Needle and needle-holders are those of Martin; the needle-holder is really Langenbeck's; a smooth blunt instrument, without catch, so that it can be handled with greater rapidity. The needle is a very strong hand-made one, semi-circular, straight at the extremity toward the eye, so as to be safely grasped by the needle-holder without danger of breaking, thus it is firmly held, and, if properly made, not liable to break, as a part only, the cutting end, is strongly tempered, the end grasped by the needle-holder much less so. The silk suture is more easily managed than the silver and not at all annoying.

After this thoroughly aseptic operation, the surfaces are well dried, dusted with iodoform, and iodoform cotton or gauze tampons inserted as a dressing.

Presuming that the operation has been a thoroughly aseptic one, the after-treatment is accordingly very simple; the dressing is not disturbed until about the fourth day, when it is renewed again on the seventh; on the ninth or tenth the sutures are removed.

In major operations I would call attention to some details observed by most foreign operators, but here very much neglected, that is the importance of thorough asepsis and antiseptics of vagina and rectum before, during and after operation; and this is to be borne in mind in minor operations. I would most earnestly urge the importance of close and perfect adaptation of surfaces. We should no longer hear the question asked, how many sutures

are necessary, as the problem is so easily solved if the operator will only see that the surfaces and edges are everywhere closely and perfectly adapted, no matter how many sutures are called for. They do no harm, but must, if a perfect result is to be expected, be close together.

### A MODIFIED OPERATION FOR CYSTOCELE.

By THADDEUS A. REAMY, M.D., of Cincinnati, O.

From the *Medical News*, Aug. 8, 1885:—Cystocele is rarely found in women who have not borne children. It is rarely disassociated with deformity of the vagina.

Now, the question is, What can be done for the relief of this condition? I am well aware of the fact that in any surgical measures yet devised, we have not in all cases, even permanent relief, much less cure. Indeed there are many who deny that permanent relief is obtained by any surgical or other measures in any case. With these views I cannot agree. My own clinical experience fully warrants me in dissenting. In almost every case where there is not serious uterine prolapsus, as well as prolapsus of the vagina and bladder, permanent relief may be expected provided the surgery be well done. But of course in cases where there is perineal loss, with vaginal deformity and prolapse, the operation for cystocele proper must, in every instance, be associated with or supplemented by perineorrhaphy and, if necessary, colporrhaphy.

As to my own method, I have followed it in public hospitals and in private practice for eight years, with very satisfactory results in favorable cases. I think it has some important advantages.

For the operation, the patient is placed in the extreme lithotomy position, an assistant holding each lower extremity, the posterior vaginal wall held back by Sims's speculum. The tissues are caught up by a small double-toothed tenaculum forceps, and the cutting is done with long scissors, sharp-pointed, curved on the flat—the same as used in perineorrhaphy.

A constant stream of water at 100° F. is allowed to play on the field of denudation, the water being carbolyzed. This controls hemorrhage and keeps the field clear.

Dr. Reamy then illustrates the direction of the denudation, which is V-shaped and made in the redundant tissue between the meatus urinarius and the cervix uteri, beginning a short distance behind the meatus and extending it (width and length in each case varying) backward to the point where it branches into two arms that extend some distance out beyond the cervix.

With regard to the depth of the denudation, as you come down toward the urethra, you can denude very deeply, but it is not necessary to go so deep then as it is further up toward the bifurcation of the denudation. Here, however, if you simply take off the mucous membrane, and do not go through the muscular tissues of the vagina into the cellular tissue between the vagina and bladder, the operation will fail, and because you can denude so deeply with safety by this plan is one of its chief advantages. At the upper extremities of the denudation it is better not to go too deeply, on account of the ureters, but that danger I do not regard as great. Denude deeply, for the more deeply within limits the more certain you will be to get good results.

After the operation the patient must be kept in bed and a self-retaining catheter kept in the bladder, constantly, for eight or ten days until union is complete. This, I regard as essential, since the distention of the bladder, which may not prevent union, will nevertheless prevent the union from occurring with the field of the operation in the contracted state so favorable to good results. These remarks will impress you as all the more important, if you recall my recommendation always to carry the denudation through the vaginal wall, at least near the centre.

I have operated after the method proposed in fifty cases, and think my experience warrants the claim that it possesses the following advantages: (1) Simplicity, ease of execution. (2) Less width of denudation is required at any given point, in order to secure the necessary contraction after closure than in other methods. (3) The deep denudation necessary to cure, in all cases, can be done by this method with greater safety. (4) Since tension upon any one line of the operation after union is less than after other methods, and since the deep denudation causes firm union, the good results are likely to be more permanent. (5) After cure, the vaginal orifice and entire anterior wall of the vagina will conform more perfectly to the original.

### EMMET'S OPERATION—WHEN SHALL IT AND WHEN SHALL IT NOT BE PERFORMED?

By E. G. ZINKE, M.D., of Cincinnati, O.

From proceedings of the *Amer. Med. Ass'n*, 1885:—Dr Zinke addressed the following questions to a large number of the prominent American and foreign gynecologists, to those known to be opposed as well as to those who favor the operation.

*First*.—Do you believe lacerations of the cervix uteri to be an important factor in uterine and pelvic disease? Twenty-two out of thirty-five answered in the affirmative unqualifiedly; only one answered "no."

*Second*.—Do you believe fissures of the cervix uteri a cause of uterine or pelvic disease? The majority answer "sometimes;" then answer "no."

*Third*.—State your theory in what manner a lacerated cervix will or may cause disease of the uterus, its surrounding tissues, and in parts remote.

The substance of these answers is as follows: (1) Septic poisoning at the time of its occurrence. (2) It causes pelvic cellulitis. (3) It causes pelvic peritonitis. (4) It prevents involution. (5) It acts as a point of irritation. (6) It causes pelvic congestion. (7) It causes cervical and corporeal endometritis. (8) It causes profuse leucorrhœal discharge. (9) It causes displacements of the uterus. (10) It causes erosions and aversion. (11) It causes hyperæmia of cervix as well as body. (12) It causes hyperplasia of cervix as well as body. (13) It causes cystic degeneration. (14) It causes numerous reflex symptoms, especially from irritating cicatricial contraction. (15) It causes menorrhagia. (16) It causes sterility by preventing conception and causing abortion. (17) It lays the foundation for epithelioma.

*Fourth*.—Do you believe laceration of the cervix a cause of sterility? Seventeen answered "yes," and three "no."

*Fifth*.—Do you believe that Emmet's operation, if performed early and properly, will, to some extent or entirely, prevent uterine and pelvic disease? Twenty answer affirmatively; only one gives a positive "no."

*Sixth*.—Do you believe that Emmet's operation is absolutely necessary in certain cases? If so, specify the class of cases?

The sum of the replies to this is, that the operation should be carefully and perfectly performed: (1) When pathological changes exist which depend on the laceration, and which cannot be disposed of by other treatment. (2) When the laceration is deep, bilateral, or stellate, with a history of cancer even before secondary changes occur. (3) When in advanced age it prevents senile involution. (4) When subinvolution and cervical disease exists. (5) Where there are large gaping rents. (6) Where there is villous degeneration of the endometrium. (7) In menorrhagia. (8) In habitual abortion. (9) To lessen the danger of cancer after the child-bearing period. (10) Where there is cicatricial tissue in the rents, causing reflex symptoms.

*Seventh*.—Do you believe every lacerated, not fissured, cervix, will cause eventually uterine and pelvic disease?

The greater number answered "no," or "not necessarily;" a few believed that the majority of the lacerations will; and only two answered "yes."

*Eighth*.—If not, state approximately how many such cases you have observed?

Five answered "quite a number, but by far the minority;" not a few have "kept no statistics, but have seen quite a number;" three "never;" one "six;" two "100 or more;" one "about 40;" one "over 50;" one says "impossible to do so;" four do not answer, and one "has seen many hundreds."

*Ninth.*—State approximately, or exactly if you can, how many times you have performed the operation? Total No. operators, 89; cases, 4,045.

Drs. Emmet and Thomas have both confessed that to-day they do not operate as frequently as formerly.

*Tenth.*—What have been your immediate results respecting union and relief?

Most of them answer, "good."

*Twelfth.*—When, in your opinion, is Emmet's operation contra-indicated? The answers to this may be summed up as follows: (1) In acute or sub-acute inflammations. (2) In pelvic cellulitis. (3) In pelvic peritonitis. (4) In lymphadenitis. (5) When ovaries and tubes are diseased. (6) When the uterus is very irritable. (7) Never the rent *eo ipso*. (8) Pregnancy. (9) Menopause, if no eversion or hypertrophy exist. (10) Manifest hydro- or pyo-salpinx. (11) When there is no ectropion. (12) When there are no Nabothian bodies apparent. (13) When there are no symptoms of uterine origin. (14) Not needed in limited lacerations or fissures. (15) When local treatment gives relief. (16) When peri-uterine adhesions exist. (17) When uterus is immobile. (18) When there is neither eversion, local congestion, or reflex disturbance. (19) When there is cancer of the neck or body of the uterus. (20) When patient is suffering from pulmonary consumption or other grave malady.

Operators may be divided into three classes. (1) Those who advocate operative interference in every lacerated cervix; (2) those who do not endorse the operation at all; (3) and those who deem it a necessity in some "well-selected cases" only.

That the operation is too often performed, that cases are operated upon in which no indications for it exist, that as a consequence the results looked for are not obtained, that the patients, so far from being relieved, are subjected unnecessarily to procedures not free from danger, and occasionally followed by unfavorable results, rendering the patient worse instead of better, is the opinion of many.

If a lacerated cervix is the cause of all the ills the text-books and authors attribute to it, then every rent in that portion of the womb ought to be sewed up. We are compelled to admit that it is not true that every tear in the cervix is productive of evil, and that it is not good practice to stitch up every os simply and solely because it has sustained a slit; nor is it fair to assume that because certain diseased conditions co-exist in, around, or near the cervix or the uterus and its appendages an operation is necessary to a cure. I have arrived at the following conclusions:

1. It is evident that the operation has been performed unnecessarily for symptoms similar to, but other than those arising from lacerations of the cervix; further, that it has been done imperfectly, even without preliminary treatment, in many more; and the failure to give relief, as reported by several, is due to these two causes.

2. That from our present knowledge we cannot at this time arrive at any definite conclusion, from the fact that many of the so-called consequences of laceration of the cervix uteri are not settled beyond doubt.

3. That every one engaged in this department should carefully select his cases, and try every known means to give relief before recourse is had to operation.

4. The operation should never be performed *eo ipso* in cases of simple fissures or lacerations of first and second degree.

5. In cases of eversion and disease of the cervical and corporeal cavity, or both, although attended by hyperplasia and displacement, it has sometimes been observed that all the symptoms abated, that all the parts returned to their natural condition, and that no laceration was discoverable after the employment of alleviative measures alone.

6. That there are some cases of extensive lacerations of the cervix that seldom give rise to any inconvenience, and that, therefore, an operation should be deferred until symptoms arise that will call for its performance.

7. The operation, although indicated, should never be performed until, by preparatory treatment, the parts have been brought so far as possible into a healthy condition.

8. Near, and during, the climacteric period, the operation should be postponed as long as possible and the patient not be exposed to any risks, since in many cases all the symptoms subside under proper treatment and never return, on account of senile involution.

9. The operation is justifiable in cases of lacerations of the third and fourth degree, without complications, if there is a history of malignant disease in the family.

10. The operation may be performed with perfect propriety in young women as a preventative, if the laceration is bilateral and extends up to the cervico-vaginal junction or beyond it, even though there are no pathological changes; indeed, it seems to be the duty of every one who observes a lesion to that extent to urge an operation.

11. The operation is justifiable in any degree of laceration, and in rare instances, even in fissures, when there exists cicatricial tissue productive of reflex disturbances, annoying in character, and not tractable under any other treatment.

12. The operation is absolutely indicated in all extensive tears of the os, in which the cervix is everted, its mucous membrane and Nabothian follicles diseased, and especially if there be granular or cystic degeneration present, provided the parts have first been restored to a healthy condition by palliative treatment.

#### THOMAS'S ANTEFLEXION PESSARY.

Dr. W. H. BAKER, of Boston (*Boston Med. and Surg. Jour.*), says this instrument, which is the most efficient one for the majority of cases of ante-flexion of the uterus with which I am familiar, has sometimes annoyed me in two ways, namely, in a certain class of cases where there exists a shallow vagina; that is, where the vertical diameter of the vagina is very small there is a great liability of the joint or hinge cutting into the posterior wall of the vagina, on account of the irregular and somewhat unfinished end of such joint. In another class of cases the movable arm does not increase the power, as is necessary in keeping the body of the uterus high enough to give the required relief.

To obviate these difficulties I have modified the instrument so that the first objection is met by the joint itself becoming a part of the posterior angle and finished regularly and smoothly with it, thus doing away entirely with the metal pin which supported the joint. The second difficulty is not only overcome, but the instrument made much more efficient by making the movable arm after the pattern of the lower part of an ordinary Albert Smith retroversion pessary.

#### PERFORATION OF THE CERVIX UTERI BY A TENT.

From *Proceedings of N. Y. Obs. Soc.*—Dr. C. C. LEE related a case which suggested the advisability of caution in using laminaria tents for dilating the cervix uteri. The patient, a middle-aged single woman, entered his service at the Woman's Hospital with what was believed to be a submucous fibroid attached to the anterior wall of the uterus a short distance above the internal os. The vagina was narrow and the cervix long, making it difficult to outline the growth with the finger, and, as frequent hemorrhages pointed to the necessity of adopting some efficient mode of treatment, it was decided to dilate the cervical canal. Laminaria tents were introduced, carefully

watched, and changed sufficiently often. They were held in position by carefully adjusted vaginal tampons, which were never very tightly packed. The uterus was slightly anteverted. On the removal of the tents on the last occasion—they had not been put in by himself, but by a careful and experienced house surgeon—he was astonished to find a large perforation on the anterior surface of the cervix at the internal os. It was evident that these tents, of which two were then in the canal, had, by their expansion and by the pressure of the tampon, perforated the anterior side of the cervix at the vaginal junction. This was the first time he had known the accident to occur, but, on inquiry among his friends, he had learned of two other similar cases, the tents used being of laminaria. In his case, instead of making the usual incision, he divided the cervix posteriorly up to the internal os, and anteriorly up to the perforation, and was then able to reach the greater portion of the tumor. Carbolyzed cotton was applied to the cervix, and the patient, notwithstanding her reduced condition, recovered. The result of the granulating surfaces were such as to call for trachelorrhaphy, after which the cervix was left in a pretty fair condition.

Dr. Mundé had met with cases in which an ulcer in the wall of the long cervix had been formed by stem pessaries and tents which the physician had failed to introduce through the internal os. In some cases a little force was required to push the instrument through the internal os, and he had no doubt that inexperienced or careless persons might make a mistake and cause an injury of the cervical wall. A laminaria tent would be more likely to cause ulceration than one of tupelo.

Dr. Lee remarked that it was possible the tent used in this case was tupelo instead of laminaria, but he thought it was the latter. The accident could not have arisen from the cause spoken of by Dr. Mundé, because the internal os was well dilated when the last tent was removed. He could readily understand, however, that, if a tent was not made to pass the internal os, it might press against the solid tissue of the wall and cause ulceration.

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#### AN ANTISEPTIC CURETTE.

Dr. NOEGGERATH presented at the New York Obstetrical Society, a curette the handle being a tube for the conveyance of an antiseptic fluid from a syringe or irrigator during the operation of curetting the uterine cavity. In a great many cases of curetting there was no urgent necessity for antiseptic treatment, but there were other cases in which it could not be dispensed with; those, for instance, in which there was sepsis two or three weeks after miscarriage, parametric or perimetric inflammation, or mucous fibroids in which the curette was employed to remove the hypertrophic condition of the membrane. He had recently employed the curette, with a stream of bichloride of mercury solution running through it into the uterine cavity, in a case of extreme sepsis after miscarriage, and the temperature fell almost immediately afterward.

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#### DIAGNOSIS OF GONORRHEA IN THE FEMALE.

MARTINEAU, at a recent meeting of the Paris Obstetrical and Gynecological Society (*Canadien Practitioner*), stated a most important fact by which specific can be distinguished from simple vaginitis. It depends upon this, that in the specific form of the disease the pus is always acid, while in the simple it is alkaline. It is very easy, therefore, to decide by a piece of litmus paper as to whether a woman is or is not suffering from gonorrheal inflammation. This sign will prove of value, too, in determining when rape has been committed, whether the person committing the crime was affected with gonorrhea, for then the vulvitis would be characterized by an acid discharge, while in the simple form of the disease the discharge is alkaline.

## DISEASES OF CHILDREN.

## DISEASES OF CHILDREN.

By JAS. F. HANNA, M.D., Chairman of Subcommittee on Diseases of Children, Missouri State Medical Association.

From the *Kansas City Medical Record*.—The best food for the infant beyond all cavil, is the mother's milk. As childhood is reckoned to begin about the seventh month, it is readily seen that the beginning of childhood is a very critical period of human existence. This is the time when the diet begins to undergo a change from the fluid to a more solid diet; and a change in the diet of this sort is likely to derange the alimentary canal in some part of its course, which will soon make quite a change for the worse in the nourishment of the child. We believe this to be true: that a prolific source of all the diseases that most interfere with the development and nutrition of the child is found in disturbances of the digestive tract; and these disturbances are generally results of the use of improper articles of food, or food taken in improper quantities or at unseasonable times. The food must be suited to the digestive capacity of the child. If a child has had only its mother's milk until nearly seven months, it must not be put upon a diet of solid food—in short, bread and meat—right at once. It must have a mixed diet until its system has become somewhat accustomed to the solid food, until its stomach has been educated to tolerate something else than milk.

The same precautions must be exercised in the administration of medicines to children. We must be careful to use medicines slowly, sparingly, with children. From the facts in the case, a diagnosis of their ailments is often obscure and attended with difficulty, and oftentimes, at best, involves great uncertainty. They cannot tell us much about what hurts them. We have to depend upon objective symptoms and physical exploration mainly for data upon which to base a diagnosis. An old country smith once asked a young doctor, "When you are called to see a child and can't tell what is the matter with it, what do you do?" He replied, "Give it a dose of calomel and go back the next day." Perhaps, unless there were signs of great pain, a better practice would have given time and returned the next day; and in a twenty-four hour's dose of time, the probability is, nature would have relieved the patient, or the disease would have so developed as to be easily recognizable.

The pulse of the child beats quicker, the respirations are more frequent, and of course the circuit of the circulation is sooner made, than in the adult, and the child may truly be said to live faster, and to be more active. This very activity, in connection with imperfectly developed organs, may render him more susceptible of disease; and it may also be one reason why he more quickly oftentimes recovers. Perhaps the best preparation we can make for the management of the diseases of children is to make ourselves familiar with their physiology, and, indeed, it is doubtless the best preparation we can make to successfully diagnose and treat the diseases of adults. Study well their circulation, respiration, and specially well their digestion; then use the right food at seasonable times, always exercising discretion in regard to quantity and quality—and let our medication be based upon true physiological principles, and administered in keeping with the soundest and most approved therapeutical rules.

## THE TREATMENT OF CHOLERA INFANTUM.

Dr. W. BYFORD RYAN, of Willow Branch, Ind. (*Indiana Med. Jour.*), in a paper read before the Indiana State Med. Society gives the following indications for treatment:—(a) To restore the blood supply to the surface, thereby relieving measurably the visceral engorgement. (b) To establish and maintain capillary action of the entire economy, thus arresting extravasation of serum with all its attendant evils. (c) To give tone to the muscular and mucous coats of the bowel. (d) To supply proper nutriment.



These are the indications. Can they be satisfactorily met? I answer, unequivocally, they can.

Nor yet have I any new drug to present which possesses the powers requisite for the prosecution of a successful warfare against cholera infantum—nor any nostrum or formula even; but an old weapon (a two-edged sword) with which all are familiar, yet one, so far as I know, not before used as a remedy in this affection. The agent to which I refer is the *atropia belladonna*, which I regard as the remedy *par excellence*, the specific and prime factor about which all other remedial measures should circle as auxiliary—important and useful, but altogether secondary.

Having come to conclusions satisfactory to myself as to the ætiology of infantile cholera, I cast about me for rational means with which to combat existing conditions.

We find peripheral anemia; belladonna is the most potential means for flushing the superficial capillaries.

We find the vascular system of the intestines and stomach engorged and sieve-like, permitting liquor sanguinis to escape into the lumen of the viscus; belladonna produces dryness of mucous membranes.

We find extreme irritability of stomach and intestines, giving rise to vomiting and excessive diarrhœa; belladonna produces partial anæsthesia of these mucous surfaces and promptly relieves this condition.

We find progressive anemia, produced by endosmosis of serum; belladonna arrests the waste immediately.

Finally, basing the assertion upon actual experiment by myself and those upon whom I have, with the earnestness of positive conviction, pressed the importance of its administration, I can safely say that belladonna will, in every case, arrest both the vomiting and the diarrhœa at once, and that no child sick of this dread summer complaint, who has a fair constitution, need be lost if it have this treatment, combined with and followed by such tonic measures and nourishment as will suggest themselves to any intelligent physician.

Minute doses of *nux vomica* and arsenic I regard almost as essential as tonic treatment. I refrain from suggesting formulæ, but cannot close my remarks without protesting against the use of mercurials in a disorder where there is no lack of bile secretion, and where the blood is being rapidly broken down without the help of agents which produce that effect.

#### THE SALICYLIC-ACID TREATMENT OF THE INTESTINAL CATARRH OF INFANCY.

Dr. WILLIAM A. NORTHRIDGE, of Brooklyn, (*N. Y. Med. Jour.*, Aug. 29, 1885) writes as follows concerning this method:—I do not wish to detract from the value of opium in these diseases, cautiously and properly administered; but I do wish to protest against the careless routine use of the drug, because of its tendency to aggravate the passive congestion of the brain and the serous effusion into its membranes, which so often occurs and is so fatal. Salicylic acid is absolutely harmless and safe; children bear it very well. It may be administered to a weak infant in comparatively large doses, say one grain and a half every two hours, without danger. The formula used at the Sanitarium is in the following proportions:

R. Acidi salicylic, gr. iij; cretæ preparatæ, gr. ij; syrapi simplicis, 3j M.

This much at a dose to a child of six months or over every two hours. As with other remedial agents, the medicine must be supplemented by proper diet, nursing, and, above all, by removal from the disease-breeding atmosphere of the city to the pure, fresh air of hills or sea-side whenever possible. The patient will begin to improve after the administration of a few doses, and in twenty-four hours the case generally will be markedly better. It will be noticed that the passages diminish in frequency, the watery, greenish-yellow stools being replaced by those commencing to have consistency and to assume a more natural color. In severe cases the passages become gradually less frequent. There is rarely a sudden cessation of the diarrhœa.

And now, in conclusion, I will state:

1. That in salicylic acid and its derivatives we have most valuable remedies in the treatment of diarrhoeas, and especially in those occurring among children during "the heated term."

2. That its remedial powers are due, first, to the anti-fermentative powers of the acid acting locally; second, to an alterative effect through the circulation.

3. That it is an efficient substitute for opium in those cases where that drug is contra-indicated.

### SURGICAL TREATMENT OF INFANTS.

By DEFOREST WILLARD, M.D., of Philadelphia.

From the *Med. and Surg. Reporter*:—*Hare-lip* will early require the careful study of the surgeon, situated as it is upon the portion of the body that is most regarded in the cosmetic point of view. The time for the performance of the operation is a point upon which there is a wide diversity of opinion. My rule is to relieve the deformity within three or four days if it interferes with the proper nursing of the child. Practically I must confess, however, that by the end of the operation the milk has left the mother's breast, unless there is some other baby to maintain the flow. My preference is to wait about three months, until a full, vigorous activity of growth and cell-action is at work, and before the process of dentition has commenced. This period is selected not only for the reasons mentioned, but also because the child cannot use its hands as freely as at a later period of infancy, thus avoiding risk of injury.

If cleft palate co-exists with hare-lip, an additional necessity for early treatment is present, since the closure of the lip will tend greatly to lessen the gap in the hard palate. Dentists realize more fully than surgeons how slight is the pressure required to act upon a tooth or upon the alveolar process; but a moment's reflection will convince any practical man that such narrowing can be accomplished, even if he has never witnessed it. In these instances, as in hair-lip and many other deformities, neglect is often as much the fault of the physician as of the family. An early operation upon the lip, strong pressure upon the maxillary bones, followed by the use of a Hainsby's compressor, will in a few years bring the cleft so closely together that a simple operation will unite the edges.

*Tongue-tie* is a condition that exists more frequently in imagination than in reality, yet the operation for its relief need be no more than the most trifling nick of the frænum, the finger completing the work. If the organ can be protruded to the red border of the lip, no operation is necessary.

*Club-foot* is a deformity which is frequently neglected, very frequently from the incomprehensible advice of the family physician, who has counselled that "nothing shall be done for the present." I have never been able to comprehend any reason why delay should be countenanced a single day after birth, since manipulation and subsequent fixation can easily be accomplished at the first dressing of the child. I know of no words sufficiently strong to characterize such neglect of duty as is seen in numerous instances. The secret of cure of club-foot lies not in operation, but in careful attention to all the means of relief. At the first hour of birth manipulation should be commenced by bringing the foot from the abnormal into a normal position, or as near it as possible, and confining it there by wood, felt, binder's board, or leather splints, rightly adapted. At the next visit, leather, gutta percha, or preferably, printer's blanket cinctures should be laced upon the foot and leg, and connected by an elastic strap. The two-ply printer's blanket, with its rubber face, does not slip even when applied with only moderate tightness, thus being superior to other materials. Hook-eyellets are easily inserted by any shoemaker, and the lacing need not impede circulation. Manipulation can be practiced twenty times a day without taking off the apparatus, while removal at night gives opportunities for massage, frictions, etc. If co-operation of parents is wanting, plaster-of-Paris can be employed with excellent advantage for fixation, a gain being effected with each month's

renewal of the dressing. Leather, felt, sheet-lead, and silicate of soda are of use, but do not permit removal for manipulation, and are, therefore, inferior to the bands already mentioned. Failure after tenotomy is nearly always due to the neglect of manipulation. The special form of apparatus is far less important than a strict attention to details.

I cannot too strongly emphasize my appreciation of plaster-of-Paris in the treatment of fractures in infants, giving, as it does, a perfectly adaptable material, and yet, when hardened, securing an immobility of the injured part that permits free handling, provided the articulation both above and below the injury is included in the dressing.

The resultant deformities of infantile paralysis are numerous, and are frequently passed over by both physician and parents, under the erroneous impression that nothing can be done for the relief of these poor weakened members. Recognizing that restoration is best accomplished by massage, electricity, etc., and particularly by action, it is my rule never to assist a muscle if it is capable of permitting locomotion, or unless deformity is being produced by non-support. The following are considerations that determine the necessity for apparatus. If a bone is bending, or an articular surface becoming distorted, or a ligament yielding, or muscles becoming atrophied from excessive stretching, or if by applying a support the child can be made to walk, then I always order an apparatus which shall not take the place of the enfeebled muscles or put them in splints, at rest, but which shall render just enough assistance to enable them by hard contraction to accomplish the desired purpose.

*Nevi*, if situated upon exposed portions of the body, must be cured early in life if rapidly increasing in size, and in the majority of cases should be attended to before six months is reached. The question of excision, ligature, subcutaneous ligature, injection, electrolysis, or sun-heat, will depend upon situation, size, etc.

*Webbed fingers* and supernumerary toes and fingers will yield small resultant scars, if operated on during the first half-year of life.

*Wry-neck* may follow injury to the spinal accessory nerve during labor, or it may be found as a result of some of the exanthemata. If resistant to local and constitutional remedies, myotomy should be performed at the end of a year.

*Rickets*, fortunately, is seen upon this side of the Atlantic far less frequently than on the Eastern shores, and, I am thankful to say, is seldom found in Philadelphia even as compared with New York. In fifty thousand cases in our hospitals, I find that less than fifty are enumerated under rickets and its results, including knock-knee, bow-legs, etc. The tibial curves are the most common defects. Very slight bowing is sometimes corrected in the growth of the individual, but we have no more right to expect that such a result will spontaneously occur than that a crooked tree will be blown into the upright position by chance winds. The proper means should always be used to compel rectification.

To permit the deformity to continue is not only unsightly, but also interferes greatly with the locomotive powers. It is not true that a bow-legged man is strong. He has, on the contrary, to use his limbs at a disadvantage, and if he is vigorous it is in spite of his complaint.

### THE CURE OF SPINA-BIFIDA.

By V. P. GIBNEY, M.D., Prof. of Orthopædic Surg., N. Y. Polyclinic.

In the *Detroit Lancet* (Aug., 1885) are reported two cases treated according to the plan recommended by Morton, of Glasgow, namely, to aspirate once or twice and inject the iodo-glycerine solution (R. Iodine resub., gr. x; potass iodid, 3 ss; glycerinum, ℥ i. M. Half a drachm the average quantity injected) Dr. Gibney concludes his paper as follows:

One would think that the injection of the sac would be dangerous, and indeed speedy death has in some instances followed the injections. Remembering, however, the anatomy of spina-bifida as Prof. Humphrey has so well

demonstrated in the lecture above mentioned, it is easily seen how harmless the fluid may be. He states when speaking of this treatment, "you will perceive that the separateness of the cavity of the sac from the cavity of the arachnoid, in most instances, is some security against the direct passage of the injected fluid into the latter cavity, and that the advantage of Morton's fluid, as an injection, probably depends upon the addition of glycerine to the iodine and iodide of potassium, lessening the liability to the diffusion of those irritating substances through the delicate lining of the sac into the surrounding subarachnoid tissue."

In this day of antiseptics the surgeon finds it extremely difficult to resist the temptation to do a cutting operation—an excision even. Yet in view of the anatomy of spina-bifida, the plan advocated by Mr. Morton, of Glasgow, seems to be altogether the safer and the more scientific. With good surgical judgment to guide one, and a knowledge of the parts implicated the vast majority of cases of spina bifida ought to be amenable to treatment.

### RACHITIS.

By HENRY N. READ, M.D., of Brooklyn, N. Y.

From the *N. Y. Med. Jour.*, August 29, 1885.—A somewhat extended experience has established the opinion in my mind that rachitis is second only to tuberculosis, and indeed not very far second to this disease, as a general or constitutional disorder of childhood. Rachitis is never a congenital disorder, nor, strictly speaking, even a diathetic disease, if by diathesis we mean a constitutional predisposition to the development of a certain affection. Rachitis may be defined, then, as "a general disease," not hereditary or diathetic, "affecting the nutrition of the whole body; arresting natural growth and development; perverting and delaying ossification; retarding dentition; causing the bones to become soft and to yield to pressure, and the muscles and ligaments to waste; and in many cases producing alteration of the brain, liver, spleen, and lymphatic glands." Rachitis is a direct consequence of malnutrition, and the prime agencies are those which fall under the heads of improper food and defective hygiene. Insufficient and especially unsuitable food, and want of fresh air and sunlight, are the two causes to which rickets may be charged. The majority of cases are found, of course, among the poor, but the disease is by no means confined to this class. Among the poor, the one cause which is more potent than another in the production of rickets, is want of sunlight; among those in comfortable circumstances, improper food takes the first place. When the nursing child is weaned is the time usually for the commencement of rachitis. Rachitis may also be developed by too long a continuance of nursing, the mother's milk being unsuitable to the growing wants of the system. Rachitis is seldom seen under one year of age, and almost never under six months. The cases of so-called "congenital rachitis" are not true cases of the disease. Neither is there any connection between rachitis and congenital syphilis, though Panot has labored with no little ingenuity to show them to be identical. The period of its inception, therefore, shows a close connection with weaning, and naturally with the ingestion of unsuitable food. The tubercular diathesis, strange to say, seems to wield a protective influence against rachitis. This is probably explained by the fact that children who are born tuberculous will, from the causes which develop rachitis—viz., bad air and food—die of tubercular phthisis ere rachitis can be set up.

The prognosis in rachitis, may be stated to be good, provided the disease is recognized early. In none of the constitutional diseases, except in congenital syphilis of infants, do we get better results from proper treatment than in rickets; but to be managed successfully it must be recognized in the early stages. It is rarely a primary cause of death, but as a secondary cause it is second to few of the diathetic diseases.

The symptoms of rickets can be readily recognized, but are often overlooked or misinterpreted. The first are the sweating about the head, the

feverishness at night, the tendency to kick off the covers on the part of the child, the indigestion, grinding of the teeth, diarrhoea alternating with constipation, pasty, dull complexion, circles under the eyes, and tumid belly. Next in order the child becomes fretful and cross, and cries if moved or dandled, evidently suffering pain from handling. He sits quiet and makes no attempt to move; will play with toys put into his hand, but makes no effort to go after them. The digestive derangements at first are limited to a lessening of the digestive powers. The stools are large, pasty in consistence, offensive in odor, and contain large quantities of undigested materials, as well as slime and greenish masses. Flatulence is common. The urine is very acid and causes pain in voiding. The sweating, slight at first, now becomes very profuse, and occurs principally during sleep. Beads of moisture stand on the brow of the child, and the pillow is usually wet in the morning. Following this commence the changes in the bones characteristic of the disease. The ends of the bones are enlarged and the shafts thickened. All the joints are notably increased in size, the wrists and ankles being peculiarly noticeable. Great tenderness is manifested not only in the bones and joints, but in the muscles also. The enlargement of the sternal ends of the ribs is one of the most commonly recognized symptoms of rhachitis, and gives to the chest the well-known beaded appearance, as it is called. The whole thorax is altered later, producing the deformity known as the "pigeon breast." It is in the skull, however, that the most important bone changes take place,—most important because I believe that rhachitis may be recognized, or at least suspected, before other symptoms have become marked, from the appearance of the skull alone. The skull in the large majority of rickety children is too large. Two principal varieties of large heads are met with in children—the cyclocephalæ, or round heads, and the dolichocephalæ, or long heads. The first, or cyclocephalic head, almost always belongs to the tubercular child, and the second, or dolichocephalic head, almost invariably belongs to the rhachitic child. A child with a dolichocephalic head may, *prima facie*, be suspected of rickets; if, in addition, there be delayed dentition, there are ten chances to one that rhachitis is present. In examining the heads of children it is important to remember two things: first, that shape, not size, of the head is of most value; second, that long heads mean increase of the solid contents of the skull, and that round heads mean increase of the liquid contents of the skull. To ascertain the base-line and greatest antero-posterior diameters of the cranium, only a pair of calipers and a tape-line are necessary. The procedure is as follows: One leg of the calipers is placed upon the glabella (nasal eminence) the other just beneath the tuber occipitale; the calipers is then removed carefully without displacing the legs, and the distance between the two points of the instrument is carefully noted. This is roughly the base-line of the skull. One leg of the instrument is now placed on the most prominent portion of the frontal bone, and the other leg upon the most prominent part of the occiput; the calipers then being removed, the distance between the two points will give us the greatest antero-posterior length of the skull. These two measurements must be in the proportion of five to six to each other; a very simple sum in proportion will, therefore, enable us to tell whether the head is abnormal or not. The following case may serve as an instance: C. L., a large fat, dull-looking child, was placed in the Sheltering Arms Nursery. She was twenty-two months old, and had been nursed till her admission. Had delayed dentition, and some digestive disorder, not very great. Seemed in good health. Head measurements gave base-line  $4\frac{3}{4}$  inches, and the greatest length of cranium  $6\frac{1}{4}$  inches. Applying the rule given, we find that in the normal head we have  $5:6::4\frac{3}{4}:5\frac{1}{4}$  (base of patient): $5\frac{1}{4}$ . Therefore the child's greatest length of skull should have been  $5\frac{1}{4}$  inches, whereas it was  $6\frac{1}{4}$ —an inch longer than normal. She was pronounced rhachitic, and placed on appropriate treatment.

The symptoms of craniotabes, described first by Elsässer, is found in a certain number of cases. It is, however, rare in my experience, though it seems to be frequent in Europe. It is a lesion of the bones of the skull, generally the occiput, and is detected by pressing with the tips of the fingers

firmly on the head. If the condition be present, the bones yield slightly under the finger-tips, a small indentation being made. The spots where this change of bone takes place are small, and are due to imperfect ossification. The symptom may be met with as early as the sixth month, according to some authorities.

The last symptom which I shall notice is the delayed dentition. In a large majority of cases the evolution of the teeth is retarded till the tenth, twelfth, or fifteenth month, and after the teeth are cut they quickly blacken and crumble away. This symptom, however, unless accompanied by others, is of no great value, as delayed dentition depends on many other causes than rachitis.

The treatment may be divided into the hygienic and the medical. Under the first head comes the supervision of the child's whole life. If the patient be at the breast, it should immediately be weaned if possible. The food should be personally inspected, both as to quality, quantity, and times of administration, no hearsay evidence being admitted. If the starchy foods are given in excess, this should be corrected; if the variety of starch given be one difficult of digestion, another should be substituted for it. Finally chopped beef, fresh eggs, and peptonized milk should be added in suitable quantities to the child's diet. Saccharine matters should, as a rule, be avoided. Mutton-, chicken-, or clam-broth, with stale bread and fresh butter, may be allowed. The alvine discharges should be carefully inspected, and diarrhoea corrected by a small quantity of the bicarbonate of soda, administered in peppermint-water with a few drops of spirits of chloroform. This will also relieve the flatulency which is apt to occur. Flannel should be worn next the skin winter and summer; in the latter a broad flannel bandage over the bowels is sufficient. The child should be bathed twice a day, and the body rubbed well with cod-liver or olive oil. The profuse perspiration may be checked by applying the tincture of belladonna—a teaspoonful to half a pint of water—several times daily to the skin. The patient must be taken into the open air regularly twice daily, no matter what the season is, provided it does not storm. In case of those who live in basements or north-easterly exposed rooms a change of residence is desirable. After indigestion has been corrected and the stomach gotten into a good condition we may commence the exhibition of therapeutical agents. Cod-liver oil and the ferruginous tonics are the chief remedies to be employed. It is well to begin with a small dose of the oil, fifteen to twenty minims. Iron, quinine, and the bitter tonics may be employed afterward as occasion demands.

#### THE FREQUENCY AND EARLY SYMPTOMS OF RICKETS.

Dr. C. G. JENNINGS, of Detroit (*The Medical Age*), shows that in frequency and importance in London, Glasgow and Berlin, it ranks with measles and whooping-cough; and that in the United States the percentage is far above what it has generally been believed to be, Dr. Parry stating that twenty-eight per cent. of all the sick children between one month and five years old in the children's department of the Philadelphia Hospital is rather under than beyond the truth.

There are two symptoms which indicate the onset of the disease, and are, therefore, of the greatest value in making an early diagnosis. They are, (1) sweating about the head and neck, and (2) a feeling of heat at night, impelling the child to throw off the bed-clothes and lie naked in his cot.

The sweating is profuse and occurs chiefly at night. The moment the child is laid down large drops of perspiration appear upon the head, run down and saturate the pillow. It may occur also in the daytime when the child is asleep, and frequently on emotional excitement and slight muscular exertion. With this symptom frequent crops of milaria appear.

The earliest and the most uniformly present deformity is beading of the ribs. At the junction of the ribs with the costal cartilages, the bones become soft and thickened, and presents marked elevations. All the ribs are more or less involved, and the row of prominences is often termed the "rachitic rosary."

Coincident with beading of the ribs, *craniotabes* is found. *Laryngismus stridulus* is also, according to most authors, directly dependent upon *craniotabes*. Children who have *laryngismus* after the first month or two of life are, with but rarely an exception, the subjects of *rachitis*.

Very soon after beading of the ribs enlargement of the ends of the long bones of the extremities is observed, and is earliest seen in the wrists.

### PROLAPSE OF THE RECTUM.

By C. B. NANCREE, Prof. of General Orthopædic Surgery in the Philadelphia Polyclinic.

From the *Polyclinic*.—How are you to treat these cases in children? After removing every assignable cause, the general health must be attended to. It is of paramount importance not to allow the child to sit and strain at stool; the motions should only be passed lying upon the side, at the edge of the bed, or standing, while in either position traction should be made upon one buttock, so as to tighten the anal orifice. A previous enema of simple cold water is advisable, to soften the *fæces*. After the motion, the prolapse should be bathed with cold water, returned, and an injection of  $\frac{1}{3}$  ij to  $\frac{3}{4}$  iv of simple cold water, or of some unirritating astringent, as decoction of white oak bark, or solution of sulphate or sub-sulphate of iron, should be thrown up. Various suggestions have been made whereby the prolapse can be mechanically retained, either after its first appearance or later on in the case. When the skin does not become irritated, a pad of oakum, tow, or best, a soft sponge, should be placed over the anus, after which the buttocks should be forcibly pressed together and retained in position by a broad, transverse strip of adhesive plaster. Of course, simple recumbency will do as well as this, but is not always possible to secure, especially in the case of children. If the skin becomes irritated, notwithstanding frequent washings with alcohol, some one of the various anal trusses must be resorted to, if the case be a very old or desperate one, otherwise, an operation had better be performed for the radical cure of the affection.

In what cases should an operation be resorted to? Only in those where palliative treatment is either inapplicable or inoperative. This condition usually complicates internal hemorrhoids, but after the radical operation for their cure the prolapsus spontaneously disappears. Why is this? The answer is plain, and gives us the key to the treatment of prolapse: Any and all of the radical hemorrhoidal operations involve a degree of traumatism which sets up inflammation in the sub-mucous coat, thus glueing the mucous and muscular coats together, and, in addition, some of the skin around the anus is sacrificed, thus slightly narrowing the orifice. It is, then, manifest that any traumatism setting up a sub-mucous plastic inflammation will suffice for a cure, unless atony or fatty atrophy of the sphincter ani muscle is marked. Even in such an event, a cure need not be despaired of by appropriate measures, to which I cannot here advert.

How shall we most safely and expeditiously gain our end? Etherize the patient; elevate the hips by a small pillow, as you see me do; reduce the prolapse and introduce a large-sized Sims speculum. Then, as you see, I draw, with the thermo-cautery, at a dull red heat, three or four lines, commencing in this patient about two inches within the anus and bringing the lines down to the delicate muco-cutaneous margin. An opium suppository and a pad and bandage complete the operation. Nitric acid may be used, painted in vertical strips; the actual cautery or the galvano-cautery may also be resorted to; but the operation which I have just done is the simplest and best. The after-treatment is of importance. The patient must retain the recumbent position for at least a week, the lateral position or the bed-pan when having a motion, must be insisted upon, and, even after leaving bed, the bowels had best be moved in one or the other of the positions which I have suggested, for at least a week or ten days longer. Costiveness must be carefully avoided after convalescence, and had best be remedied by enemata rather than purgatives.

## MUMPS; WITH AN UNUSUAL SEQUEL.

By RICHARD McSHERRY, M.D., of Baltimore, Md.

From the *Jour. Amer. Med. Ass'n*, June 6, 1885.—All the contagious diseases present complications or sequelæ more or less familiar to practitioners, but generally we find attributed to mumps only metastasis to testes in males or mamma in females, or mayhap some affection of the ears, or occasional though rare suppuration of or about the parotid or other salivary glands.

But, in fact, there may be various other complications or sequelæ which may need attention. Thus some French observers, Lannois and Lemoine, call attention to the pseudo-rheumatism which may attend or supervene upon mumps, just as it may upon other infectious diseases, as erysipelas and scarlet fever. It may attack the articulation or synovial sheaths of muscles; in short, there is an apparent sub-acute rheumatism, which, however, is not amenable to the therapeutic agency of salicylate of soda.

According to Dr. Fournié, hearing and sight are apt to be temporarily or permanently impaired, the disorders coming on during or subsequent to the attack of mumps. Thus we may have deafness, temporary or permanent, and occasionally some of the symptoms of Ménière's disease. There may be otorrhœa, from catarrh of the meatus, or otherwise we may find ocular complications, as, 1, conjunctivitis; 2, inflammation of the lachrymal gland; and, 3, sensorial derangements of diverse nature.

These affections are supposed to be due to the infectious principle of the disease upon the nervous system.

The writer lately had a case in which there was a sequel more remote from the seat of origin than about the eyes or ears. Miss S., a finely developed lady, aged about five and twenty, having recently recovered from a severe attack of mumps, complained of great pain in deglutition, which she located especially about the centre of the sternum though radiating to the sides of the chest, and backward toward the spine. There was no fever.

It is in evidence that some perturbing neurotic disturbance, some morbid sensibility, was affecting the tract of the œsophagus in the middle of its way.

Was the œsophageal disease a sequel proper of the mumps, just as a pseudo-rheumatism may be, or was it merely a *post-hoc* development? In the treatment of the case the oleaginous mixtures and morphia had some relieving effect, but did not cure. How much of this result may be due to the *assaftetida*, or how much to the profound impression made by the mercurial? There was doubtless some hyperæmia at the sensitive part of the œsophageal mucous membrane, if not actual inflammation, and it is reasonable to believe that a free secretion caused at once in the salivary glands, as well as in the racemose glands of the œsophagus, by the mercurial, greatly promoted the cure. Salivation was certainly no part of the design, and the writer is quite willing to let the reader judge for himself as to the remedial influence of the various agents used.

## LOSS OF HEARING FROM MUMPS.

Dr. CHARLES KIPP, of Newark, N. J. (*N. Y. Jour. Med.*, Aug. 22, 1885), reports a case in a man eighteen years of age, in which the total loss of hearing was in the right ear only, which was first noticed fifteen days after the commencement of an attack of mumps, while the patient was suffering from a metastatic inflammation of the left testicle. As all signs of irritation of the acoustic nerve were absent, it seems highly probable that the disease was limited to the cochlea. Whether the morbid process here was an inflammation with serous or hæmorrhagic effusion or embolism of the cochlear artery, it is difficult to say. Kipp thinks that an extension of the disease from the parotid gland of the ear along the facial nerve, or through the external canal and tympanic cavity, seems highly improbable; he thinks it much more likely that the inflammation of the parotid, the orchitis, and the ear affection are merely local expressions of the same morbid condition of the blood. Another case was similar to the first, except that there was no orchitis.



## ADDENDA.

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### THE TREATMENT OF SICK-HEADACHE.

Dr. W. GILL WYLIE, of New York, has produced excellent results with the following method of treatment: So soon as the first pain is felt, the patient is to take a pill, or capsule, containing one grain of inspissated ox-gall and one drop of oil of gaultheria, every hour until relief is felt, or until six have been taken. Dr. Wylie states that sick-headache as such is almost invariably cut short by this plan, although some pain of a neuralgic character remains in a few cases.—*N. Y. Med. Journal*.

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### GALVANISM FOR NEURALGIA.

Dr. MATTISON of Brooklyn calls attention to the value of galvanism for the relief of neuralgic pain, not because there is anything new in the treatment, but to point out the fact that electricity may often be used instead of morphia, and spare the patient the danger of contracting the opium habit. He has found that very weak currents only are required in most cases, and laments the absence of small galvanic batteries easy to carry about, believing that the bother of transporting the galvanic batteries of the usual 'portable' size often prevents physicians from trying the remedy.—*Iowa State Med. Rep.*

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### TREATMENT OF SHOCK.

The following views in regard to the treatment of "shock" are expressed by Gröninger of Berlin.

Energetic counter-irritations of the skin are to be excluded as useless and even dangerous.

Abstraction of blood is contraindicated.

Transfusion of blood can only be thought of in cases of great loss of blood.

Opium and chloroform are of no value whatever in shock, while digitalis is worthy of further study.

Alcoholic stimulants and subcutaneous excitation are useful. Horizontal posture, application of warmth, perfect rest, and subcutaneous injection of strychnine are the most recommendable factors of treatment.—*Therapeutic Gazette*.

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### ANTISEPTIC INHALATIONS IN PULMONARY TUBERCULOSIS.

Miquel (*Bull. gén. de therap.*) recommends the use of a spray containing the following ingredients: R. Corrosive sublimate, 16 grains; Sydenham's laudanum, 5 drachms; distilled water, 2 quarts.

Le Fort (*Ibid.*) prefers this combination: R. Camphor, 8 ounces; tincture of iodine, pitch, ss 30 drachms; Hoffman's anodyne, 1 ounce. This should be placed in a wide-mouthed bottle, and the vapor inhaled at short intervals.

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### A SOLUTION FOR USE IN PULMONARY GANGRENE.

Bucquoy (*Ibid.*) suggests the following: R. Tincture of eucalyptus, 30 minims; syrup of poppy, 10 drachms; water, 3 ounces. The dose is not stated.—*N. Y. Med. Jour.*

### POUILLET'S POWDER FOR NASAL CATARRH.

Sulphate of soda, bicarbonate of soda, sulphate of potash, gum arabic, acid tartaric, of each equal parts. Dry and mix. Dose, ten grains to a quart of warm water. Spray through the nose or throat, as desired twice a day.—*Phil. Med. Times*.

### THE MOVEMENTS OF THE STOMACH.

ROSSBACH, of Jena, has been making some experiments, with a view to a better understanding of the movements of the stomach, derangements of which he believes to be at the bottom of many digestive troubles. The experiments were made upon dogs under the influence of profound morphia narcosis, and the results presented to the recent Congress für innere Medicin at Wiesbaden, and published in the *Deutsche med. Wochenschrift* for April 30.

He has ascertained that as soon as the stomach is filled with food the peristaltic movements begin, at first feebly, increase gradually, and continue from four to eight hours. They occur only in the parts adjacent to the pylorus. The empty stomach is either entirely without motion, or exhibits only occasional and very feeble movements. The pylorus is closed during the entire period of digestion, and the emptying of the stomach begins suddenly when gastric digestion is, for the most part, accomplished. The duodenum is quite at rest during the entire period of gastric digestion.—*Medical News*.

### EBSTEIN'S DIETARY FOR OBESITY.

1. *Breakfast*.—In winter, at half-past seven; in summer at half-past six, a large cup of black tea, without sugar or milk, 50 grammes of white or brown bread toasted, with plenty of butter.

2. *Dinner*.—Two to half-past two, soup (often of bone-marrow), 120 to 180 grammes of roast or boiled meat, with a fat sauce to fat meat preferred; vegetables in moderation, preferably the legumissions; also cabbage. Carrots almost proscribed potatoes; entirely so. For dessert, fruit is permitted, fruit stewed without sugar, or a salad. As drink, two or three glasses of light white wine. Also after dinner a large cup of black tea, without milk or sugar.

*Supper*.—Half-past seven to eight. In winter almost regularly; in summer occasionally a large cup of black tea, without milk or sugar. An egg or a piece of fat roast meat, or even both. A little fat ham, sausage, or fish smoked or fresh; about thirty grammes of white bread, with plenty of butter, finally a little tea or fresh fruit.—*Bulletin General de Therapeutique*.—*R. Z., Canadian Practitioner*.

### LOCAL TREATMENT OF CARCUNCLE.

Dr. JAMES F. HIBBERD, of Richmond, Ind. (*Indiana Med. Jour.*) recommends the *oleate of morphia*. The oleate used is a 10 per cent. of morphia, and the direction was to take a drop on the bulb of the finger and spread it over the surface of the carbuncle as far as it would go, and then take another drop and apply to additional surface. In the case of Mr. G. two drops covered the surface and a little circle around the margin. This should then be rubbed in by gentle but increasingly firm friction until the oleate disappears into the skin, and this process should be repeated every three hours until relief or the constitutional effect of the morphia is apparent. Each minim of the oleate contains the tenth of a grain of morphia.

No constitutional treatment has been mentioned in connection with my cases of carbuncle, not because such treatment is deemed unimportant, but because, in the first place, my cases recovered so rapidly there was little room for general treatment; and, secondly, I am only calling attention to a special local treatment and leave every practitioner to his own ideas of constitutional remedies.

## THE TREATMENT OF CHRONIC OTITIS MEDIA.

Dr. W. W. SEELEY of Cincinnati (*Proceedings of Amer. Otolog. Soc.*, 1885) gives the following propositions:

1. That only experience of sufficient length of time (often lasting over months) in each case can determine whether treatment shall be continued (daily), or interrupted, *i.e.*, perhaps daily for a week, followed by an interruption of some weeks or months.

2. Only experience in each case can inform us whether treatment is to be entirely directed to the middle ear, or entirely to the naso-pharynx or combined against both.

3. Only experience in each case can inform us whether injections into the *cavitas tympani* are called for. Under this head it was stated that direct medication, either of the middle ear or naso-pharynx as routine treatment was unwise, till simple inflation had failed.

4. Mechanical dilatation of the tubes is rarely necessary or advisable. Only in extremely dry states of the tube is dilatation followed by much success.

5. Hearing tests are not reliable, and hence patients with great deafness, great loss of bone conduction, etc., should not be sent away till the test by trial has been gone through with.

6. Simple inflation failing, the greatest attention should be given to the naso-pharynx, even though it is in an apparently fair condition.

7. Syringing, douching, and swabbing the naso-pharynx should be abandoned.

## PRESBYKOUSIS.

Dr. D. B. ST. JOHN ROOSA, of New York (*Proceedings of the Amer. Otolog. Soc.*, 1885), applies this term to senile impairment of hearing not dependent upon inflammatory affections. It comes on after the age of forty or fifty. Such persons do not hear well in a noisy room, and hear the watch badly, but they can hear quite well in a quiet room. In inflammatory diseases the person can often hear pretty well in a noise, while in a quiet room he hears badly. Three conditions go together—diminished bone conduction, hearing worse in a noise, and the disproportion between hearing the voice and the watch.

Dr. Knapp thought that the term *presbykousis*, if used in analogy with *presbyopia*, was not a good one, as it would indicate a diminished range of accommodation of hearing which would refer more to pitch than to anything else. What is meant is senile involution occurring in every organ.

Dr. Orne Green had been considering the subject for some time, and had arrived at the same conclusions as Dr. Roosa.

Dr. Holt had examined a large number of persons with ear disease who claimed they could hear better in a noisy than in a quiet room, but was unable to find that this was correct. He referred to a report of such observations made two years ago.

Dr. Roosa defended his position with regard to the term *presbykousis*, he said, with regard to hearing a noise, that he was convinced that patients with tympanic disease could hear better under such circumstances, and cited the example of a lady who heard with difficulty under ordinary circumstances, but in a boiler-shop she heard the ordinary voice distinctly, while her husband, with normal hearing, could only hear loud-spoken words.

## TREATMENT OF GONORRHEA.

D. BARDUZZI reports in the *Giornale Internazionale delle Scienze Mediche* extraordinarily favorable results from cautious injections of a solution of corrosive sublimate, 0.01-0.03 to 100,0 aq. destill. This solution should be injected at an early stage of the case. Four or five injections daily of two grammes only are made. Thus only the anterior portion of the urethra is reached by the fluid.

## ACUTE INFLAMMATION OF THE THYROID GLAND.

A correspondent, Dr. C. L. LANG, of this city, sends the following account of a case of this rare affection. A Bohemian woman, thirty-seven years of age, in the eighth month of pregnancy, was attacked with pneumonia. She was delivered of a living child on the second day of the disease, but the course of the pneumonia was favorable, and at the end of two weeks the patient was able to walk about her rooms. The temperature, however, remained from 1° to 2° above the normal, and there was some hectic, but careful examination failed to reveal any mischievous process in the lungs. After a few days she began to complain of pain in an old goitre, which had existed eleven years, and had never before given her any trouble. The inflammatory process went on to suppuration, an abscess formed and opened, and from that time convalescence was rapid and satisfactory. The chronic enlargement of the thyroid gland dated from the birth of the patient's first child, but had not been influenced by any subsequent pregnancies, of which there had been five. It was situated chiefly in the right side of the neck, extending but little beyond the median line. During the period of acute inflammation prior to the opening of the abscess the patient complained of dysphagia and dyspnoea when in the recumbent posture. About four ounces of pus were discharged when the abscess opened.—*Medical Record*.

## AN ANTISEPTIC OINTMENT.

Dr. M. B. WARD, of Topeka, Kan., sends the formula of an antiseptic ointment which he found very useful while in charge of the hospital department of the Mexican Central Railway. It consists of iodoform, 3 j.; subnitrate of bismuth, 3 vij.; vaseline, 3 ij. This formula was not strictly adhered to in all cases, but was varied according to individual indications. Another formula, suggested by Dr. J. W. Thayer, was iodoform, 3 j.; boric acid, 3 ij.; subnitrate of bismuth, 3 iv.; vaseline, 3 ij. The ointment was spread upon a sheet of absorbent cotton sufficiently large to cover the wound and a considerable extent of surface around it. "The dressing seemed to be the best suited to the after-treatment of amputation wounds. It could be removed when necessary with the greatest facility, as it never adhered to the wounded surface. I usually allowed the first dressing to remain undisturbed for from four to six days. There never was present, even in the warm climate of Mexico, the least disagreeable odor, so common when carbolic dressings are used." This dressing was used in over four hundred cases of injuries of various kinds, including ten gunshot wounds and numerous amputations and other capital operations, and of this number there were but two deaths.—*Medical Record*.

## ON THE USE OF CONCENTRATED SOLUTIONS OF SALINE CATHARTICS IN DROPSY.

From the *Boston Med and Surg. Jour.*:—Dr. MATTHEW HAY, in the *London Lancet*, proposed a novel method for the treatment of certain cases of dropsy, based on the administration of concentrated solutions of saline cathartics. He there cites a case of cardiac dropsy where the patient seemed to be in the last extremity from suffering and prostration, dyspnoea, ascites, and general anasarca. "An abundance of soft râles all over the chest indicated a pronounced œdema of the lungs. He had taken every variety of renal and cardiac stimulants, and had been purged repeatedly." Dr. Hay ordered that he should have as little as possible of food and liquids during the night in order to free the alimentary canal from digestive juices and other fluids and permit the full action of the salt. The next morning three ounces of sulphate of magnesia were administered dissolved in two tablespoonfuls of hot water, no water to be given afterward.

The result was most gratifying. In less than an hour after the purgative had been given, its cathartic effect was manifested and there were repeated evacuations in the next few hours; on each occasion the water seemed to "gush" from him, and he passed unusually large quantities of urine. There evidently had not been merely a removal of so much fluid from the blood and tissues as was necessary for the usual dilution of the salt within the intestines, but the sharp, sudden withdrawal of fluid from the tissues by the concentrated blood had initiated a movement of the fluid into the latter which had continued for some hours after the direct action of the salt and the blood had ceased and until the tissues were in great part rid of their superfluous liquid. The improvement was, in fact, most marked, and continued under an occasional repetition of the concentrated saline solution. The conditions of the treatment, then, are previous abstinence from food and drinks and the administration of the salt (which should preferably be Epsom, on account of its great solubility) in a large dose in the smallest possible quantity of water.

#### INCONTINENCE OF URINE.

In a lecture on diseases of children, published in the *Medical Press and Circular*, Robert Lee, M.D., draws a distinct line between that form of urine which occurs in the night and that which occurs in the daytime. He says Trousseau first pointed this out, and showed that belladonna acted promptly when the incontinence occurred at night, and not so well where the trouble persisted through the day. In these cases there is a partial paralysis of the sphincter, and strychnine gives the best results.—*Louisville Med. News*.

#### CONTAGIOUS CONJUNCTIVITIS.

Dr. JOSEPH A. ANDREWS, of New York, in a paper read before the *N. Y. Acad. Med.*, referred, under the head "causative," to the history of the gonococcus and gave the history of a single case in which he inoculated the conjunctival surface with the seventh generation of pure culture, with the result of producing a typical gonorrhœal ophthalmia.

With reference to the cause of ophthalmia in the new-born, Dr. Andrews said there was no positive proof that normal lochia ever gave rise to conjunctival blenorrhœa.

As to granular conjunctivitis, he had searched in vain in the tissue for the gonococcus or cocci like it; but cocci were found in the secretion from these eyes, which was undoubtedly contagious, and the secretion was capable of carrying the disease.

Concerning the prophylaxis of ophthalmia neonatorum, it consisted in the thorough and judicious cleansing of the vagina before labor, and, after birth, the eyes of the child, with a saturated solution of boracic acid, followed by dropping one drop of a two per cent. solution of nitrate of silver into the conjunctival sac.

The treatment of purulent conjunctivitis consisted of washing away the matter and rendering the conjunctival surface antiseptic as nearly as possible. For irrigation the best solutions were a saturated solution of boracic acid or a two per cent. solution of carbolic acid.

When the eye has been cleansed, paint the conjunctival surface with a two per cent. solution of nitrate of silver—if very much swelling is present, with a four per cent. solution, neutralize with a solution of chloride of sodium, and then cover the conjunctiva with an antiseptic dressing consisting of vaseline and boracic acid. Apply cold by means of pledgets of lint or pieces of muslin from blocks of ice. In severe cases the cornea is in special danger, and the douche must be used frequently.

Dr. Andrews had used iodoform, quinine, and bichloride of mercury, but found that they had no advantages over the boracic acid or carbolic acid solution.

## PERSISTENT PRIAPISM.

Dr. L. A. STIMSON (*N. Y. Surg. Soc.*) presented a patient who had had priapism nearly three months. The stream of urine was small, but there was no pain or micturition. There was but slight sexual appetite. The penis had remained without change in size or color. The first thing noticed by the patient—forty-eight years of age, married twenty-five years, good family history, doubtful history of syphilis—was that his erection was slow to subside. There were no symptoms of locomotor ataxia or leucocythæmia. Dr. Stimson regarded the case as one of central origin.

Dr. A. C. Post referred to a case of equal priapism that continued three months in an otherwise healthy man.

## THE EXTERNAL APPLICATION OF SULPHIDE OF CALCIUM IN SMALL-POX.

Dr. J. A. M'ARTHUR, of Winnipeg, Man., says:—Several years ago, Surgeon Major C. J. Peters, of the British army of India, experimented with sulphide of calcium as an external application in small-pox, and although the cases were few in number, the favorable results were such that he was induced to give an account of the treatment adopted. So favorably impressed was I with the success of the treatment, that I resolved to employ it the first opportunity that occurred.

The writer then gives his experience in a case of confluent small-pox and continues: The sulphide is evidently absorbed and acts in a constitutional manner, for the pustules on the parts of the body and arms not painted, shrivelled and dried up equally as rapid as those where the application was made.

Another important feature noticed, was the entire absence of itching and desire on the part of the patient to scratch. At no time did the patient feel any desire in that direction, and the sickly, deathly exhalations, so characteristic, were scarcely perceptible. There was no pitting—a very important consideration.

The liquid is prepared by boiling a quarter of a pound of quicklime and half a pound of sulphur in five imperial pints of water until the liquid is reduced to three pints, when it is filtered and kept in glass-stoppered bottles. It is applied to the affected parts two or three times a day with a brush or feather, taking care that none of it gets into the eyes.

The writer believes that the lotion acts by destroying the germs of the disease, preventing suppuration, and guarding against the complications that result from blood-poisoning.

## THE RELATION BETWEEN SYPHILIS AND MORTALITY IN INFANTS.

Dr. ALFRED FOURNIER (French Acad. of Med.) observes as follows concerning the reduced increase of the population of France: (1) Syphilis constitutes an active and powerful cause of infantile mortality; the average deaths due to this cause may be estimated at 68 per 100, of children descended from parents suffering with the disease. (2) The remedies by which this special cause of infant mortality may be diminished are of two classes: 1. Methodical and sufficiently prolonged medical treatment, and prohibition of premature union of parties suffering from syphilis. 2. Measures relating to public hygiene (the general prophylaxis of syphilis).

The first are in the hands of the physician, and by using them rigorously the mortality due to infantile syphilis may be much decreased. Measures of the second order, Dr. Fournier holds, are in the hands of the health committees and general government, and these, where their resources are inefficient, should be improved.—*Annales de Dermatologie et de Syphiligraphie.*

# QUARTERLY EPITOME

OF  
AMERICAN PRACTICAL MEDICINE AND SURGERY.

WESLEY M. CARPENTER, M. D., Editor.

The most noteworthy event of the summer quarter is the action of the committee of the American Medical Association on the International Medical Congress.

It is greatly to be feared that the "crack of doom" has been sounded over the proposed meeting for Washington in 1887. The action taken by the committee at its meeting in Chicago received the disapproval of nearly all the medical journals in the United States, and this disapprobation was endorsed by the withdrawal from the organization, under present management, of the very great majority of the eminent men throughout the country. On account of the impolitic action of the committee, our European contemporaries have lanced us for the indecent bickerings and medical politics which have been allowed admission through the agency of a select few who decoyed to their assistance the support of the American Medical Association. The handwriting appeared upon the wall. The storm of indignation was more than the craft could withstand. Accordingly with broken rudder she was hauled to, and a secret session was held in September at which gaunt figures, likened unto men, moved about mysteriously with darkened lanterns, and planned for the future.

The result has only added to the prospects of a dismal failure. A crippling surrender of first principles stares in the face the association, which claimed the right "to alter and amend," and if it cares a tithe for its vaunted honor it will spew from its mouth the proffered sop at the next annual meeting to be held in St. Louis.

We have been very much impressed with the comprehensiveness of an editorial in the *Eastern Medical Journal*: "Perhaps the prominent men in the cities, who have resigned, know what they want;—perhaps the members of the original committee know what they mean;—perhaps the members of the Chicago committee know what is desirable;—perhaps *another* new committee should be formed;—if that is illegal, form a new association;—if that is impracticable, perhaps then they will tell us what they do MEAN." It seems quite evident, however, that the American medical profession means not to be led *en masse* by questionable dissentors, nor to be governed without protest by those who prefer personal aggrandizement to scientific progress.

When Dr. Ferran announced that he could prevent by inoculation the occurrence of cholera, and proceeded to carry into effect his method, a sensation was produced no less marked than that which attended Jenner's discovery. Unlike vaccination, however, the claims made by Ferran have not withstood the test of scientific investigation, and his castle has collapsed. His system not only proved to be extremely hazardous, but well-authenticated fatal results have been recorded against it, and both author and system now stand as additional illustrations of chimerical schemes with which the world, from time to time, has been visited.

Laryngeal Phthisis has, until within a very few years, been regarded as an incurable affection. The progressive improvement of instruments used in

its diagnosis, and the treatment of ulcerative laryngitis tubercular in character, has enabled surgeons to effect, not only a hitherto unobtained amount of relief, but a complete cure in a goodly number of cases; that is, absolute healing of the ulcers with total relief from all their distressing symptoms. This is a great advance and one which is exceedingly gratifying.

A recent monograph on this subject by Dr. W. Macneill Whistler, of London, Eng., reviews the history of the disease and the success obtained in combatting it by surgeons both in the United States and in Europe. His conviction is strong that the amenability of laryngeal phthisis to treatment has not as yet been investigated with sufficient scrutiny to justify the conclusion that it is absolutely unpromising. With very great propriety he directs attention to the necessity of early examination of the larynx and a correspondingly prompt resort to local measures to allay irritation. The slight cough and hoarseness, with occasional soreness, have been looked upon as of but little importance and as requiring treatment only through general measures. But this should not be the case if the best results would be obtained; and, while the question of prognosis must ever be a grave one, well authenticated instances of recovery from pulmonary phthisis are on record, and special treatment of the laryngeal complication should not fall into disrepute, because so slightly beneficial when resorted to in advanced cases.

The treatment of pulmonary phthisis has received a new item in experiments made to prove that inhalation of spray laden with the *bacterium termo* kills the *bacillus tuberculosis*.

#### BOOK NOTICES.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W.

S. Playfair, M.D., F.R.C.P., Prof. of Obstetric Medicine in King's College, Examiner in Midwifery to the University of London, etc., etc. Fourth American from the Fifth English edition with notes and additions, by Robert P. Harris, M.D., with three plates and two hundred and one illustrations. Philadelphia: Lea Brothers & Co. 1895.

This standard English work which has already gained an unprecedented reputation as an obstetric text-book in our American schools is again presented to the profession thoroughly revised.

In writing this work the author has admirably combined beauty, system and, for the most part, clearness of expression.

The presence of a good index, together with italicized headings to the paragraphs, render the work a most admirable one, either for review or reference.

The chapter on Conception and Generation has been partly re-written "so as to incorporate the most recent advances in Embryology."

Not to speak disparagingly of the effort in the descriptions of a subject so difficult, this chapter does not even yet receive that hearty commendation we would so readily bestow upon other portions of the book.

In revising the chapter on Diseases of Pregnancy he has very wisely omitted the paragraph entitled "Altered State of the Blood," seen in the last edition, in which he endeavored to account for puerperal albuminuria by the "super-albuminous condition of the blood," a statement in every-way contradictory to the correct and previous assertion that the blood of pregnancy is deficient in albumin.

The editor's additions and footnotes will prove a most valuable accession to the work, serving especially to render its teachings more in accord with American experience. For



instance, in the text referring to the necessity of resorting to the mutilation of the child where ordinary means fail to reduce the impaction, he cites eleven cases of Cæsarean operation performed in the United States out of which there were eight recoveries. "Can," he asks, "craniotomy or evisceration show any more favorable results?"

Again the editor notes five cases of chloroform poisoning during labor reported before the American Gynecological Society in which three were restored by artificial respiration and two died.

If, indeed, these were true cases of death from chloroform the prevailing impression and teaching among obstetricians as to the immunity in the use of this agent from danger demands immediate and extended refutation.

One colored plate illustrating the corpus luteum and numerous woodcuts have been added.

The mechanical execution of the work is excellent.

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**CHOLERA: ITS ORIGIN, HISTORY, CAUSATION, SYMPTOMS, LESIONS, PREVENTION, AND TREATMENT.** By Alfred Stillé, M. D., LL.D., Prof. Emeritis of the Theory and Practice of Med in the Univ. of Penn. Philadelphia: Lea Brothers & Co. 1885.

Happily the possibility which led to the publication of this treatise has not been developed. The summer has passed, the autumn has not ended, but it is scarcely probable that cholera will find its way into our midst this season. Of course, this fact does not detract from the intrinsic value of the book before us, a systematic and well-written essay contains a scholarly *résumé* of the essentials in the history of this dreaded disease. It is not at all strange that

been already equally well said; for it would be nearly impossible to say anything new, unless it pertained to experimental research with reference to either etiology or therapeutics; indeed the points most insisted upon are those which relate to prevention and treatment, and include the necessity of quarantine in the official sense of the word. He declines to accept Koch's theory with regard to the material germ of the disease. He is an outspoken contagionist, and discusses this part of his subject with a vigor well calculated to carry conviction, although many eminent authorities decline to fully accept the doctrine.

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**A TREATISE ON EPIDEMIC CHOLERA AND ALLIED DISEASES.** By A. B. Palmer, M.D., LL.D., Prof. of Path and Practice of Med. in the Univ. of Mich., etc. Ann Arbor, Mich.: Register Publishing House. 1885.

This monograph, also, was written with special reference to the probable advent of cholera to the United States during 1885. The writer gives an outline of the history of the disease and the prevailing views concerning its etiology. He does not accept Koch's theory unreservedly, nor does he accept the doctrine of contagion so unqualifiedly as does Dr. Stillé. He says: "That it is not strictly and exclusively contagious I am thoroughly convinced," but adopts the definition, "Cholera is a miasmatic contagious disease, or an infectious-contagious affection." Dr. Palmer says that "quarantine as practised and as practicable at the present time, is unreliable, and if depended upon is delusive"; "and too much reliance must not be placed upon disinfection." He regards opium and calomel as remedies of great efficacy, when properly used; and under malarial conditions quinine is equally important.

**A TEXT-BOOK OF MEDICAL PHYSICS.** By John C. Draper, M.D., LL.D., Prof. of Chemistry and Physics in the Med. Dept. of the Univ. of the City of New York, etc., etc. With 377 illustrations. Philadelphia: Lea Brothers & Co. 1885.

The author has put into a form acceptable to students and practitioners of medicine the substance of his lectures for many years in this department of science. There are two parts: I. Matter; II. Energy. The first part has *five* sections: (1) Properties of Matter; (2) Solid Matter; (3) Liquid Matter; (4) Gaseous Matter; (5) Ultra-gaseous or Radiant Matter. The second part has *eleven* sections: (1) Potential Energy—Attraction; (2) Kinetic Energy—Motion; (3) Machines and Instruments; (4) Translatory Molecular Motion; (5) Acoustics; (6) Optics; (7) Heat; (8) Electricity; (9) Dynamic Electricity; (10) Magnetism; (11) Electrobiolgy. The whole book contains fifty-four chapters, in 730 pages. It is well written, and is the work of a careful, industrious, scientific student and teacher. It reflects credit upon both the author and the publishers.

**THE DIAPHRAGM AND ITS FUNCTIONS.**

By J. M. W. Kitchen, M.D., Asst. Phys. to the Bellevue Chest Class (O. D. Dept.), etc. Albany: Edgar S. Werner, "The Voice" Press. 1885.

This monograph is "the voice" first prize essay, in which the functions of the diaphragm are considered specially in their relations to respiration and the production of voice. It contains several original illustrations, and should interest those who are particularly interested in the culture of the voice. Already artists are beginning to appreciate the necessity of depth of chest to the production and sustaining of the best quality of tone.

**TRANS. OF THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE.** 1885. Nashville: Hasslock & Ambrose, Printers and Publishers, 122 Church Street.

A well-printed, paper-covered volume, of 144 pages, containing the minutes of the proceedings and papers read before the society. According to the President's address the medical profession in Tennessee is not well organized. Two thousand physicians, ninety counties, only *ten* medical societies in working order, and a painful lack of creditable articles from the pens of its own physicians in the medical journals published within the State, and only a small number who even take and read these journals.

**HAY FEVER.** By Charles E. Sajous, M.D., Instructor in Laryngology, in the Post-Graduate Course; Jeff. Med. Coll. Illustrated. Philadelphia: F. A. Davis, Atty. Publisher, 1,217 Filbert Street. 1885.

This is an essay, read before the Philadelphia Laryngological Society, in which the author gives his method for the successful treatment of this affection by superficial organic alteration of the nasal mucous membrane. It contains material with which the profession has already been made familiar through the writings of several gentlemen working in the same department of medicine.

The *Buffalo Medical and Surgical Journal* appears in a new and ornamental hat.

The *Quarterly Bulletin* of the Clinical Society of the New York Post-Graduate Medical School and Hospital is a new journal edited by the Executive Committee—Seneca D. Powell, T. E. Satterthwaite, Charles H. Brown, W. Oliver Moore, and Samuel Lloyd.

# PUBLISHER'S DEPARTMENT.

## NEWS AND MISCELLANY.

### INSANITY IN THE UNITED STATES.

—Statistics recently issued show that in 1865 the number of insane persons in the United States was only 24,042. Five years later it had reached 37,432, and by 1880 treatment was required for 91,959 lunatics. The increase in insanity during the ten years from 1870 to 1880 was nearly 150 per cent., while that of the total population was only about 26 per cent. But these figures do not represent the actual increase, and during the above period a large number of insane persons previously concealed were brought into public notice by thorough investigation. Apart from several large county asylums in the United States, there are 80 State and 40 private institutions for the care of the insane, with a proper capacity for about 40,000, but containing 53,192, thus leaving some 45,000 lunatics to be cared for elsewhere. The proportion of insane is greatest in New England, but the increase has been most rapid in the Western States. In the State of New York there are 35 institutions for the care of these unfortunate people, accommodating 11,843 patients, while it is said that there are 4,000 provided for at home.—*Cin. Lancet and Clinic.*

### PNEUMONIA TREATED BY CALOMEL.

Droux de Chapois, a French physician relates several long delayed cases of pneumonia where excellent results were obtained by fractional doses of calomel—one-twenty-fifth grain—repeated every hour. He advises a recourse being had to this treatment whenever, despite the ordinary remedies, the symptoms grow worse instead of better, when the tongue becomes dry, and when the skin imparts a sensation of great heat and dryness to the finger. He mixes one grain of calomel with a teaspoonful of powdered sugar, and after it has been thoroughly stirred for some minutes divides it into twenty-five powders. Within twenty-four, or at least forty-eight hours, he states the skin becomes damp, the temperature falls, the tongue becomes moist, and the oppression diminishes.—*Med. Notes N. Y. Trib.*

### VALUE OF THE ELASTIC TRUSS.—

W. H. Burnham, M.D., Prof. of Anatomy and Surgery, N. Y. E. Med. College, writes: Geo. V., House M. D., Supt. N. Y. Elastic Truss Co.—After suffering for thirty years, in my own person from the use of every form of Metallic Truss procurable, I, two years ago, applied your Elastic Truss, and since that time I have experienced comfort and satisfaction, and been taught the truth, that the Elastic Truss is the only instrument that should be used for the relief and cure of Hernia; and now, after more than thirty years' continuous practice, and having adjusted many hundreds of trusses, I gratefully declare it to be my deliberate opinion that your Elastic Truss is the only one entitled to the confidence of the public; that elasticity is the only power at all adapted to the requirements of a truss or supporter, and am convinced that your truss actually cures a large proportion of all cases to which it is applied, not only among children, but in numerous cases within my own knowledge of patients from 50 to 75 years of age.—*Medical Press.*

### A REMEDY FOR PILES.—C. H.

Davis, M.D., of Funkhannock Pa., writes: I can speak positively of the great value of Kennedy's Ext. Pinus Canadensis, I have been treating a case of protruding piles of twenty years' standing, making life almost intolerable at times, they have been treated for years with only palliative results, about a year ago an operation was submitted to, since which time the tumors have remained smaller and less sensitive, but a new trouble soon set in, namely, itching to a terrible extent, which nothing seemed to relieve until I tried the Ext. Canadensis two parts to one of glycerine, two or three applications of which relieved the itching entirely, and the disease is being rapidly benefitted in every way. Have used it only once a day after each evacuation. I find it an excellent remedy in leucorrhœa also.—*Virginia Medical Monthly.*

**IMPOTENCY DUE TO EXCESSIVE USE OF TOBACCO.**—Dr. J. J. Caldwell, Baltimore, reports the following case: Mr. M., aged thirty, married, of our city, was referred to me one year ago as a case of impotency. I found him a hale, hearty man, well developed mentally and physically. His muscles were hard and elastic, and he was a great walker. He hardly knew what it was to suffer fatigue. All of his organs were well developed—especially those of the genito-urinary apparatus. After thorough inquiry, I found he was excessive in the use of tobacco, chewing and smoking to an alarming extent, and at times was in the habit of using alcoholic spirits too freely, all of which I forbade. I ordered for him a moderate diet and pills of damiana and nux vomica; also the daily application of the faradic stimulus to the cord and genito-urinary appendages. He was to abstain from all genital exercises. He continued under treatment for several months with most excellent results. Tobacco and whiskey in excess are, in my opinion, a frequent and a potent inhibitor of the sexual act.—*Va. Med. Monthly.*

**PURE MALT WHISKEY.**—Duffy's pure malt whiskey can be safely recommended by the medical fraternity to their patients; it has been endorsed by eminent physicians and chemists in all parts of the country. Albert E. Menke, D.Sc., F.C.S., F.I.C., Prof. of Organic Chemistry in the Kentucky State College, Lexington, states: "I hereby certify that I have made analysis of Duffy's Malt Whiskey, and found it to be absolutely pure, not containing a trace of fusel oil or any other deleterious ingredient. It is peculiarly fitted for medicinal or any other purposes where a carefully prepared and unadulterated whiskey is desired." Dr. M. E. Arendt, Analytical and Consulting Chemist, of Buffalo, N. Y., reports: "I take pleasure in testifying that I have made an analysis of Malt Whiskey, which gave a very gratifying result. Your Malt Whiskey is entirely free from fusel oil or any of those similarly obnoxious alcohols which are so often found in whiskeys. Therefore it can be recommended as extremely fit for medical purposes."—*Medical Gazette.*

**TREATMENT OF CHOLERA INFANTUM.**—In an article on Sporadic Cholera, in Vol. VII. of "Ziemssen's Cyclopædia of Medicine," the writer places Nestle's Food in the front rank as an Infant's food. He says: "Regulation of the diet constitutes in fact the principal method of treatment of sporadic cholera, and particularly cholera infantum. When the mother's milk is insufficient, Nestle's Lacteous Farina or Milk Food, is alone to be recommended. This food is especially commendable because the physiological relations of the infantile digestive organs, particularly the lack of notable salivary and pancreatic secretions, are taken into account in its fabrication. The starch contained in it having been transformed into dextrin." Nestle's Milk Food has been successfully prescribed by the medical profession in Europe for 18 years, and in this country for 10 years.—*Med. Prog.*

**ETHER SPRAY IN VOMITING OF PREGNANCY.**—A writer in the *London Medical Record* relates the case of a young woman seized with vomiting of pregnancy, and which resisted all the usual forms of treatment, for three months. After everything that had been suggested had been tried in vain, ether spray was directed upon the epigastrium, the result being instant relief. After the first application the vomiting ceased, and on being threatened with it again a month or so later, the ether treatment was reapplied with permanent relief to the patient.—*National Druggist.*

**PEPTOGENIC MILK POWDER AND HUMAN MILK.**—J. M. Keating, M.D., Obstetrician to Philadelphia Hospital, Pa., says: "I have carefully tried Fairchild Bros. & Foster's Peptogenic Milk Powder with infants, and am truly delighted with the results. It certainly is a great advance, and I really believe it to be as near perfection as we can get it. I feel satisfied that the question of infant feeding is solved. It is especially valuable for infants who are early deprived of breast milk." Albert R. Leeds, Ph.D., Prof. of Chemistry, Stevens' Institute, reports: "It yields a *humanised* milk which in taste, physical characters, and chemical constitutions approaches very closely to woman's milk."—*Medical Times.*

**HYDROCHLORIC ACID IN THE TREATMENT OF DYSPEPSIA.**—In an article on the treatment of diseases of the stomach (*"Ztschr. f. klin. Med."*; *"Deutsch. Med.-Ztg."*), Prof. Talma, of Utrecht, lays stress on fermentation of the contents of the stomach as being either the cause of dyspepsia in the great majority of instances or at least the leading factor in keeping it up. This fermentation is generally due to a deficiency of hydrochloric acid, an artificial increase of which is therefore indicated. For adults, the author recommends a mixture of fifteen grains of the acid and twenty-two ounces of water to be taken in the course of twenty-four hours. The doses had better be taken after eating, and sensitive patients may take them lukewarm. He has observed excellent results of this treatment after the failure of long-continued alkaline medication, and even in cases of ulcer or cancer of the stomach he has seen it subdue such of the symptoms as were due to abnormal fermentation.—*N. Y. Med. Jour.*

**AN ANATOMICAL PELVIC PESSARY.**—Dr. Hofmann has shown us letters from physicians bearing emphatic testimony to the value of the "Perfect Anatomical Pelvic Pessary." His Pessary is distinguished from all others by the originality of its form, being constructed with strict reference to the pelvic anatomy. Dr. L. C. Vincent, of New York, reports the case of a lady of 65 years of age who presented herself to him for treatment. Hers was a case of providentia uteri, with consequent excoriations and ulcerations. The use of a No. 8, of Dr. Hofmann's Pessary has cured the ulcerations which caused her so much pain and made her existence miserable. The Dr. also reports two other cases of retroversion very much benefited by the use of the same. Dr. C. W. Putnam of Minneapolis, Minn., writes to the inventor: "The women of America have certainly to thank you for inventing the most perfect Pessary for both prolapsus uteri and ulceration, that it has been my fortune to use. There is absolutely no irritation arising from their use; and the thin rubber support that keeps the medicament to the ulcerated or inflamed os, is simply perfection.—*Med. Bul.*

**CRYSTALIZED PEPSIN.**—The value of pepsin in the physical economy has become permanently established, and the only mooted question is, which, among so many, is the best preparation? If the testimony of Prof. Jos. G. Richardson, Adolph Tsheppe, and many others is to be taken, surely Carl L. Jensen, of Philadelphia, has furnished the profession with a crystalized pepsin which has no equals in its digestive power. Our experience, though limited, tends strongly to confirm this statement, and we commend it to the profession, who we are sure will be gratified with its use.—*Medical Digest.*

**MILK OF MAGNESIA.**—We are frequently inquired of about "Phillips' Milk of Magnesia," whether it is in reality what it purports to be *magnesia*. Of this we are so well satisfied that we have for several years used it exclusively of all other forms of magnesia, and have not been disappointed. As an antacid and mild aperient in dyspepsia and sick headache attended with acid stomach, magnesia is well known to be one of the best of remedies. For gastrodynia, a little magnesia, a few minutes before meals is among the most certain means of relief. For acidity in the common indigestions of children it is one of the most useful of all household correctives. With it uses in bilious, rheumatic and gouty affections—alone or in combination with other remedies—all physicians are more or less familiar. For convenience and eligibility of administration, equally serviceable in the case of adults as in children, the Milk of Magnesia possesses advantages over all other preparations of that medicine.—*Sanitarian.*

**IMPROVED DIABETIC FLOUR.**—Painter's Improved Diabetic Flour more nearly represents than any other, the wheat grain from which it is made, with the Starch and Bran removed. This flour may be used in the same manner as the Diabetic Bean Flour as prepared by the late J. W. Shedden, on the merits of which the following testimony is given: Says Dr. Alex. B. Mott, Prof. Surgery, Bellevue Hospital College—"Since you prepared at my request, the flour of bran according to Camplin's formula, I have had

numerous opportunities of testing the benefits derived by its use in cases of Diabetes, and I am fully satisfied that it is not only useful, but indispensable in the treatment of that disease when a substitute for farinaceous food is required." Says Dr. John F. Gray, of New York:—"In the four cases of diabetes in which I have directed the use of your bran flour they have been quite successfully treated. It is faithfully prepared and I hope you may command the patronage of the medical men of our city and country." Says Dr. E. C. Abby, of Buffalo:—"I procured a package of your Diabetic Flour, and find it well adapted to the most severe cases of Dyspepsia I have ever seen."—*Medical Advance*.

**RUBBER HANDS AND FEET.**—The rubber foot was invented in 1863 by Mr. A. A. Marks, now the leading manufacturer in the United States. The advantages of the rubber foot are many. The chief, perhaps, is that it does away entirely with all that entanglement of cords, straps, hinges, bolts, screws, etc., by means of which the maker of the old-fashioned artificial limbs attempts to secure a natural action at the ankle joint. By Mr. Marks's system, the elasticity is thrown into the foot, giving ease and evenness of motion, as in the natural gait. The even rise and fall of the foot from heel to toe takes place exactly as in the natural member creating a motion which cannot be told from that of a person who possessed the feet with which he was born. A very practical advantage is the durability of this style of limb, saving the wearer the annoyance of constant repairs. Its simplicity is the natural cause of this enduring quality. It is also the most economical limb in the market in the matter of price and quality. Mr. Marks took the first-class gold medal over all competitors at the New Orleans Exposition, just closed.—*The National Tribune*.

**FINE STEEL ENGRAVING OF GEN'L GRANT.**—J. C. Buttre the well-known engraver has just published a superb Steel Engraving executed from a photograph from life made by Anderson of this City. This artistic picture represents a full length portrait of the General in his prime, as he looked three years ago. The size of engraved

surface is 19x25 inches. The likeness is excellent, and maintains the serene and invincible characteristics of the great commander. The Press unite in its praise, says the *N. Y. Herald*.—"The face is excellent as a likeness and well handled by the engraver. The pose is natural and as if Gen'l Grant was about to address an assemblage." *N. Y. Evening Post*.—"The head, expression, and general bearing—a very satisfactory performance—but the interest in the face preponderates, as it ought." *Boston Herald*.—"The portrait is undoubtedly one of the best ever made of the General." *Boston Advertiser*.—"The likeness is particularly correct, the posture natural and the surroundings in good taste." Above all, Col. F. D. Grant writes: "We think it very fine, as he looked when President of the United States."

**INEBRIETY, OPIUM AND MORPHIA HABIT.**—Charles E. Jones, M.D., of Albany, N. Y., says: Three to fifteen drops of B. Keith & Co's *Tinct. Avena Sativa*, every two or three hours, relieves the nervous prostration of acute *alcoholism* approaching to delirium tremens. Severe cases require hypodermics of morphine. The same doses of *Avena Sativa*, given three times a day have cured several mild cases of *opium habit*. F. F. Lord, M.D., of San Francisco, Cal., writes:—*Gentlemen*, Having used *Con Tinct. Avena Sativa* extensively in my practice, I would cordially commend it to those suffering from the *Opium and Morphia Habit*. Would especially recommend it for *Insomnia*, having used it as a last resort, where the usual remedies had failed.—*Medical Chronicle*.

**BUFFALO LITHIA WATER IN PREGNANCY.**—Caleb Winslow, M.D., of Baltimore, Md., reports: "I have found the Buffalo Lithia Water, Spring No. 2, of marked service in relieving the *Nausea of Pregnant Women*. I frequently resort to it at intervals during the whole course of *Pregnancy*. Being *antacid, laxative, diuretic, and tonic*, it seems well adapted to relieve the disturbances usually attendant upon *Gestation*, and I have no doubt its free use might remove *Uræmic Poison*, and prevent *Convulsions* produced thereby."—*Med. Examiner*.

**QUARTERLY EPITOME**  
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**Supplementary**  
**TO**  
**BRAITHWAITE'S RETROSPECT;**

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN  
THE MEDICAL SCIENCES, ABSTRACTED FROM THE CURRENT MEDICAL JOURNALS  
OF THE UNITED STATES AND CANADA.

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PART XXIV.....DECEMBER.....1885.

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#### GENERAL INDEX TO VOL. VI.

# PRACTICAL MEDICINE.

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## DISEASES AFFECTING THE SYSTEM GENERALLY.

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### ELEVATED TEMPERATURE—ITS CAUSE.

By JNO. B. ELWORTH, M.D., Prof. of Theory and Practice of Medicine, Tulane Univ. of Louisiana.

From the *N. O. Med. and Surg. Jour.*, Nov., 1885:—In what has been said our theory of elevated temperature has already found expression. It only remains to sum up the propositions discussed and from them to formulate our theory. These propositions are:

1st. Fever is not the expression of a disturbing agent, but of a thing disturbed.

2d. This "thing disturbed" is the nervous centre (or centres) controlling the distribution of the chemical energy within the human body.

3d. This chemical energy within the body is distributed into the forms of Heat, Automatic Work and Tissue-building force, of which Heat is the lowest and Tissue-building force, (since it is constructive), the highest form.

4th. Depression of the centre controlling these transformations causes it to fail in its highest function, tissue building.

5th. As combustion goes on though tissue building ceases, the energy which was destined for tissue-building force has now to appear as the lower form, Heat.

6th. The same nerve failure which arrests tissue construction and gives rise to heat, favors also the breaking down of tissue already formed; this latter process being likewise hastened by the elevated temperature.

From these our definition may be drawn as follows:

Fever results from a depression of that nervous centre which controls the distribution of energy within the body, on account of which depression tissue-building ceases and the energy destined to perform that act passes off into the lower form of heat. From this same failure of nerve power, and from the heat resulting, tissue destruction in the body is usually increased.

This definition is offered as an answer to the question with which we set out: 'What is the cause of elevated temperature?' and if the theory is correct it also answers the other question, 'Why is elevated temperature the only constant symptom of fever?' Of all the phenomena of fever, enumerated upon a former page, the definition only requires that elevated temperature should be invariably present. All of the other phenomena may or may not be present. They are not, as is elevated temperature, primary and essential, but secondary and dependent upon the condition of the patient, and perhaps upon the exciting cause of the fever.

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### ACTINOMYCOSIS.

From the *Medical News* (editorial), Nov. 1885:—Scarcely eight years have passed since Bollinger described in the ox, and James Israel in man, the first examples of this curious disease.

The actinomyces is a parasitic fungus consisting of a central matted tuft, or mycelium, from which simple or branched club-shaped threads radiate, so that the whole forms a rosette-like body. The bunch thus formed has a yellow tint, and may become calcified, and this little yellowish, gritty body, which can be plainly seen with the naked eye, is of great importance in the diagnosis of the disease. The parasite induces the development of nodular growths not unlike tubercles, consisting of round cells, and, in some instances of epithelioid elements and giant cells. There is a strong tendency to suppuration, more particularly in man, in whom the firm, sarcoma-like growths of "big jaw" in cattle are very rarely seen. The position of the fungus is still undetermined, but it is usually grouped among the moulds. Oscar Israel, Boström, and others have successfully cultivated it on gelatine, and induced the disease in animals by inoculation.

The pathological aspects of the affection are admirably portrayed in Ponfick's memoir on the subject published in 1882, and James Israel has made a critical study of the clinical features in a recent monograph issued by Hirschwald, in which the recorded cases are carefully analyzed.

Three groups of cases can be recognized according to the mode of entrance of the parasite: by the mouth and pharynx, by the air passages, and through the intestines. In the first group the disease is localized in the lower jaw, the submaxillary region, the neck, and retro-pharyngeal region, and may pass back to the spine and base of the cranium. It seems probable that in all these cases, as in cattle, the disease originates in diseased teeth, as there was affection of these parts in fourteen or fifteen cases of this group, in which the condition of the teeth and jaws was noted.

To the second group of cases, pulmonary actinomycosis, Israel makes the most valuable contributions, and we feel that he has added a new and formidable disease to the already long list of lung affections. Of nine cases, in one, that of Cantani, the process was limited to the bronchial mucous membrane. In the others the lung tissue was involved. The clinical picture is complex. The process is chronic and may exist a year without severe symptoms. The sputum contains the yellow actinomycotic granules, and is so far characteristic. Peribronchitic and pneumonic changes are excited in the substance, and cavities ultimately form. The disease tends to extend to the pleura, excites empyema, involves the costal layer, and has, in many instances, caused necrosis of the ribs and external fistulae. The prevertebral tissues become involved with caries of the spine. The peritoneum may be affected through the diaphragm, and the mediastinum and heart have been involved in some cases. In addition to this direct extension in pulmonary actinomycosis, there have been, in these cases particularly, numerous metastases which impart to them the clinical aspect of a chronic pyæmia. Skin, muscle, heart, liver, intestines, and brain, have been found the seat of actinomycotic abscesses. The course of the disease has ranged in the cases from five to twenty months.

In the third group, the disease begins in the intestinal tract. It may be, as in Chiari's case, superficial and confined to the mucosa, producing large, flat plaques, but more commonly, it starts in the substance as nodular actinomycotic growths, which suppurate and induce ulceration. The ulcers may be most extensive, and the process may extend to the serosa. By adhesions taking place between the coils and perforation of the ulcers, a series of communicating abscesses may be formed. The peritoneum has been found extensively involved, and the pus may penetrate externally, or burrow in the retro-peritoneum.

As can readily be conceived, the symptoms of the disease are most diverse, depending largely upon the organs affected. When localized in the jaws or neck, there is a reasonable hope of effecting a cure with the knife, but when it is deep seated, and has produced metastasis, treatment is unavailing. The disease occurs extensively among cattle in this country, and two cases have recently been reported from Chicago. Others will doubtless be detected when the attention of surgeons is directed to the subject. The presence of the yellow actinomyces granules in the pus may be taken as pathognomonic of the existence of the disease.



## THE CONTINUED FEVERS OF THE SOUTHWEST.

By D. H. HILL, M.D., Augusta, Kan.

From the *Kansas City Medical Index*:—The chief interest which attaches to the continued fevers of the Southwest is the fact that while they possess the characteristics found in common with those of other localities, they present a more complex history, and one peculiar to this portion of the country. In studying fevers we are met by this remarkable fact: that they all at some stage in their history present symptoms of a similar character, as if the same condition which produced the one was operating in the other. To such an extent is this true that after over two thousand years of study and experience, with our modern appliances, we are often in doubt in our diagnosis, and when we are treating a case for typhoid, may find it finally a remittent or spinal fever.

One reason for this is that as a basis for study we assume that all diseases, and especially fevers, have a specific origin, and that there is a distinct poison for each form of the disease. While in no case has the specific germ which produced the disease been discovered, yet many claim to have traced it so nearly to its hiding place that the conditions requisite for its development are known. Many theories are given, but none demonstrated.

With all due deference to those who have devoted so much time, patience and talent to the investigation of this subject, I believe that any case of fever may arise *de novo*, and that in continued as well as in some other fevers, the causes may not always be the same—that it may originate wholly within the body itself without any external influence—and upon this hypothesis alone can we account for all the conflicting phases.

Only three forms of fever demand attention as being peculiar to the Southwest, viz.: cerebro-spinal, typhoid and remittent, the last named being usually classed as malarial. The first named deserves more attention than it usually receives here in Kansas, for I am led to believe that it is of frequent occurrence, either alone or masked under the guise of the disease prevalent. It attacks persons of all ages, but shows a preference for children under ten. It goes hand in hand with dysentery, intermittent remittent and typhoid fevers, and I have seen a number of cases where it simulated closely pneumonia or inflammation of the bowels. While it is more prevalent during summer or early autumn, it may be met with during any season of the year. Its cause is unknown. The onset is usually sudden; it is often intermittent for several days, runs a rather rapid course, in many cases twenty-four or forty-eight hours. The grade of delirium is not so persistent or high as found in other parts of the country. The pulse is variable. Among children there is great tendency to spasm and paralysis. Great prostration is usually present. One peculiarity which I have noticed in many cases is excessive sweating of the head. While there may be a rash, it differs from that of typhoid, appearing more like herpes. But the most characteristic symptom is the drawing back of the head and the curvature of the spine, commencing usually in the cervical portion and descending. The mortality is large, yet more patients recover in this locality than we would naturally expect. There is no specific treatment. The indications are to allay irritation and prevent loss of strength. Stimulants, heat, friction to the spine, hot cloths, camphorated oil, etc. In preventing disturbances of the nerve centers I have succeeded best with the bromides, chloral, chloroform, etc. I believe that quinine and opium will, in most cases, do harm.

But the two fevers that we are called on to meet almost daily are remittent and typhoid.

The first question that meets us is: Do we have typhoid in the southwest? When we consider the views of many of the ablest authorities on the conditions necessary to produce typhoid, this is not an idle question. Wilson says, among other propositions: (1) It is invariably derived from previous cases of enteric fever. (2) When introduced into the human body it is capable, under favorable circumstances, of indefinitely reproducing itself. (3) It is eliminated with the fecal discharges. (4) It is capable of producing enteric fever at once in other persons, but must undergo certain changes

outside the body before it acquires this power. (5) It retains its activity when it finds its way into favorable situations for a lengthened period after it has passed out of the body, the requirements to this end being decomposing animal matter, especially fecal discharges and moisture. Hence, cess-pools, sewers, drains, dung heaps, wet-manured soils, are its usual habitat. Loomis says that where it makes its appearance it must be preceded by a case affected with the poison, and that it cannot immediately communicate itself from one person to another, but must undergo a period of incubation outside of the body, and it can only be developed in human fecal matter.

If the above statements are true, then we may well doubt whether we have typhoid fever in the southwest, for we have very few of the necessary conditions. Applying the light of common sense, however, to this as we do to other things, I think that a great many of these things are coincidences rather than causes. It is a rule in common law that to secure judgment upon circumstantial evidence, the chain must be perfect and the facts so closely connected that they can be explained upon no other hypothesis. Applying this crucial test, how far will the histories given of cases fall below the requirements necessary to make out a case. While the presumption may be strong, yet it is not wise to accept it blindly and say, great is the god of dirt and these men are his prophets!

While these may be the principal causes, yet it does not follow that they are all, and cases have arisen which could not be traced to these sources. That we do have now, and have had for years typhoid fever in the southwest, I am fully convinced, and I think the history of one case which I will give justifies this belief. During the month of July, 1879, I was consulted by a mechanic aged 27. He complained of some pain in the back, headache, weakness of limbs, loss of appetite and great prostration. His tongue had a greyish-brown coat and was red at the tip; there was tenderness of the bowels and over the spleen; pulse pretty full—98 per minute; bowels constipated. I gave him a prescription and advised him to take to his bed and send for me if he was not better soon, as I thought he was coming down with fever. Being in the country when he sent, another physician was called, who treated him from that time. In a few days I heard that he was very sick, having hemorrhage from the bowels, and as was supposed, lung disease. In another day or two I was called to assist at a post mortem. We found the stomach somewhat congested, and in the intestines the glands of Peyer had undergone the successive stages of inflammation, ulceration, sloughing, and, finally, perforation. In a number of places there was quite an accumulation of blood along the track of the intestine, the vessels bleeding from many points. Now, this man had been surrounded with fair sanitary conditions, and the only cesspool to which he had been exposed, as far as could be discovered, was a beer cellar.

The important question for us to answer here is, how can we distinguish between these two fevers in life? In typhoid, the prodromic stage is longer; it runs a regular course of weeks, seldom passing into convalescence before the fifteenth day, while remittent may be subdued in a few days. In typhoid the tongue becomes first a dirty white, then dark brown with a streak in the middle, the tip red and irritable, papillæ elevated, finally crusting over, becoming dry and cracked, with sordes. Tenderness commences usually in the right inguinal region and is in nearly every case accompanied by a gurgling sound, and to the touch there is a feeling of movable gas, the tenderness spreading over the abdomen, which finally becomes tympanitic and swollen. The pulse gradually rises from day to day with the characteristic morning and evening curve, which is not present in remittent; the delirium does not usually manifest itself before the second week, while in remittent it may come on in a few days; the patient generally lies quietly on the back, drawing up the lower limbs to relieve the tension of the abdominal muscles—in remittents, he tosses from side to side in the vain search for relief. In typhoid, the spleen is the seat of tenderness; in remittents, the liver; in typhoid, the countenance is dull and listless, the patient not complaining much; in remittent, the face is flushed, the eyes suffused, the patient uttering cries of complaint. While I have no confidence in the microscopic test

for pigment in the blood as given by Loomis, yet I think in most cases it is found in pure remittent, and not in typhoid. In typhoid there is bleeding of the nose; in remittent, never to my knowledge. In typhoid there is hemorrhage from the bowels; in remittent from the stomach. In both fevers there may be a rash, and I think it is always present in typhoid. It is more marked between the ages of ten and thirty. The spots are lenticular, rose-colored, scattered over the abdomen, appearing from the seventh to the twelfth day, coming and going in successive crops and fading gradually. Upon pressure they disappear, only to appear again. Diarrhoea is usually but not always present. The discharges are of a watery, pea green or other color, and taken in connection with other symptoms are pathognomonic. Where a case of typhoid continues over twenty-one days here in the Southwest, spinal symptoms will appear in the majority of the cases, and I think are of more frequent cause of death than any other. Any disease is likely to simulate to some extent the prevailing disease of the time. If it be scarlatina, rubella or variola, nearly everybody affected will have a rash, and the system responds so readily that when a person is attending a case of small pox he will have the premonitory symptoms although perfectly protected. Can it not be a fact then, since these two fevers are so near alike at times as to defy the skill of the old and wise diagnostician, that they are one and the same disease, and that the location of the diseased glands is simply one of migration—of no practical value in the treatment? My own method of treatment is not to worry very much in determining whether a case is remittent or typhoid, but to meet the symptoms as they arise without regard to name. In remittents, the great object is to establish a perfect remission, which may lead to a cure. This is best accomplished by cooling the body. For this purpose we have cold water, ice, in connection with diaphoretics, sponging. The application of wet sponges to the stomach is very grateful and helps to allay the vomiting. In the first stages I frequently use nothing but cold water externally, and carb. magnesia and cinnamon water internally. In remittents, give quinine as early as possible in large doses, not waiting for a perfect remission. I have never accomplished much by using it hypodermically, but use it in children by inunction and in a flannel jacket.

### THE TREATMENT OF TYPHOID FEVER.

By G. T. McKEOUGH, M.D., M.R.C.S.E., Chatham, Ont.

From the *Canada Lancet*.—Thorough ventilation is maintained constantly, day and night. Positive quiet should be maintained. No visitors should be admitted to the sick room, and it is advisable and important that the nurse be not officious or talkative, but an intelligent person, who will carry out instructions carefully and judiciously. The walls of the sick room are bared and unnecessary articles of furniture removed. Strict attention is given to the cleanliness of the patient; sheets are removed and clean ones replaced daily. The stools are passed into a bed-pan, into which some disinfectant has been placed, and immediately removed and buried some safe distance from any habitation. Water is allowed *ad libitum*. The patient's diet is certainly one of the most important factors in the successful treatment of typhoid fever. It is essential that it should be liquid, that the weakened digestive powers may not be overtaxed, and that any source of irritation to the bowels may be avoided. As soon as the disease is suspected, with the advice "to go to bed," the patient is restricted to liquid food. In the great majority of our cases milk, to the amount of a quart given regularly in divided quantities, every twenty-four hours, is our mainstay. In some cases more can be given with impunity and without unfavorable symptoms arising. In this relation, I might say that we either examine personally the stools, or carefully inquire as to their general character and to the presence of curds in them. In others milk will not agree, or can only be given in moderate quantities. Some who object to milk will relish buttermilk; in others, still, we have to depend upon animal broths, beef peptonoids, etc. The latter preparation, in conjunction with peptonized

milk, we have used of late with great satisfaction, especially if curds are found in the stools, or if there are marked abdominal symptoms. In this way the digestive powers are conserved, diarrhoea—if that exists—is lessened, less solid matter is left to undergo decomposition, and probably fever is lowered. For what is more common after an enema, which has brought away a quantity of offensive partially digested material from the bowels, than to see a restless patient with an elevated temperature, fall into a quiet slumber and his temperature drop several degrees?

Diarrhoea has not been a very troublesome symptom in the greater number of our cases; this may be due in part to the care bestowed upon the patient's diet. If there are not more than four or five alvine passages in twenty-four hours, no heed is paid to this symptom. If the discharges are more frequent and exhausting, they are checked by enemata of starch emulsion, half a teacupful, as often as necessary. If this fails, a small quantity of Tr. opium is added to the emulsion. If the bowels instead of being relaxed are constipated, enemata of salt and water or thin gruel are administered daily. When deep ulceration is suspected, a small injection is given on alternate days only. When hard faecal masses accumulate in the rectum, and an ordinary injection fails to produce the desired effect, a quarter of an ounce of inspissated ox gall dissolved in a cup of warm water, will produce a speedy evacuation, giving great relief. The non-administration of laxatives in any form is a *sine qua non* with us. When the stools are offensive, or there is much distention of the abdomen, charcoal is given in teaspoonful doses, mixed with cream, twice or three times a day; or, if this form of administration prove objectionable, it may be given in large capsules. From our experience with charcoal in this disease, when its need is indicated, we have always found it a most valuable and satisfactory remedy, by checking fermentation, limiting perhaps the multiplication of disease germs and maintaining an antiseptic action. The offensive character of the stools is corrected, abdominal distension abated, and the temperature reduced. The cases in which obstruction of the bowels have been caused by its accumulation must be rare.

When hæmorrhage from the bowels occur, the strictest quiet in the recumbent posture is preserved, the food is limited to concentrated material that leaves but little solid residue. Ice is given by the mouth, an ice-bag is applied to the abdomen, and a mixture of gallic acid and Tr. opium is administered. The latter prescription we invariably have at the bed-side of the patient in all cases after the second week, to be given if necessary, and we think life has been saved by this precaution, as some valuable time must elapse before a physician could be summoned. Directions are left for the preparation to be given immediately; although the "*vis medicatrix nature*" probably controls the majority of hæmorrhages from the bowels, it is well in the face of such a formidable symptom to assist her, and that right quickly.

In the great number of cases the temperature was controlled by the systematic and regular use of iced whiskey or iced water and whiskey, the whiskey overcoming the popular prejudice of taking cold, applied to the outer surface of the body with a sponge; the use of a fan at the same time will greatly assist in the reduction of the temperature. By these means we have never failed to keep the temperature in the mouth or rectum ranging from 100° to 102° F. It is often necessary to prolong the sponging process and sometimes resort to it very frequently, but the benefit derived fully recompenses the trouble, irksome as it sometimes proves to the nurse. It is perhaps needless to state here that it is necessary that the attendant be properly instructed in the use of the thermometer.

The disturbances of the nervous system are often peculiarly trying. The headache and delirium of the first week may be alleviated by cold applications, the menthol point, cutting the hair, or, if very distressing, the use of the bromides and chloral hydrate. Insomnia and its resultants—typhomania and coma vigil—may often be prevented by controlling the temperature from the first; but if these symptoms should supervene, alcohol, hydrate of chloral or opium may be required, for a fair amount of sleep must be

secured in all cases. Alcohol we use only when failure of heart is threatened or to increase nerve energy, as indicated by tremor or delirium. And in those cases where the surface of the body is pale, the tongue dry and brown, with sordes, alcohol by paralyzing the vasomotor system in the periphery of the body overcomes this condition, relieves pressure in the internal organs, and does great good thereby.

The only medicine that we use routinely is nitro-muriatic acid, well diluted, given because it is usually well borne by the stomach, aids the digestive process and favors the assimilation of food. Whether it has any specific action or not is yet an unsettled question.

### THE LESSON TAUGHT BY THE EPIDEMIC AT PLYMOUTH CONCERNING TYPHOID FEVER.

By M. S. FRENCH, M.D., Surgeon to the Philadelphia Police Department, and E. O. SHAKESPEARE, M.D., Pathologist of the Philadelphia Hospital, etc.

From the *N. Y. Med. Jour.*—The supreme lesson which this unexampled epidemic of typhoid fever should teach to medical men and health officers throughout the world is, in our opinion, threefold:

First. For the production of the specific infectious disease known as typhoid fever, whether individuals or communities are considered, there are required the presence and action of one specific cause, which, elaborated in the intestinal canal of one or more patients suffering with that disease, must be transmitted in an active state to those susceptible. This specific active cause being absent, typhoid fever cannot and does not occur.

Second. Epidemics of typhoid fever are a reproach to the communities which they afflict. They are absolutely preventable and controllable, and, from the standpoint of modern experience, neglect to employ proper means to those ends should be regarded as inexcusable.

Third. In is the bounden duty of the physician in attendance upon any case of typhoid fever, wherever it may be located, to cause each and every evacuation from the bowels to be immediately and effectually disinfected, and it is of paramount importance also that the danger of infection of the healthy should be further guarded against by the adoption of efficient means for the destruction of any infectious agent which may exist in the water or in the food.

### INFLUENCE OF DIFFERENT AGENTS UPON EBERTH'S AND KOCH'S BACILLI OF TYPHOID FEVER

E. BAGENOFF, in the *Vögenéd klin. Gazzeta*, 1885, Nos. 5 and 6, states the following facts concerning the bacilli of typhoid fever of Eberth and Koch.

1. The bacillus of typhoid fever is preserved in water and may even multiply to a certain extent. Therefore, drinking-water should be considered as a source of infection of typhoid fever.

2. The milk of the cow is not a favorable medium for developing the bacilli of typhoid fever; nevertheless, these bacilli may live and be multiplied therein, and therefore the milk of the cow may be an intermediate means of transmitting the infection of typhoid fever.

3. Gastric juice destroys the bacilli of typhoid fever.

4. The parasiticide action of the gastric juice depends only upon the action of the hydrochloric acid contained therein.

5. Pepsin, bile, and the pancreatic secretion do not destroy the vitality of these bacilli.

6. Bile and the pancreatic fluid even seem to favor the development of the typhoid bacilli.

7. Cold arrests the development of these bacilli, but does not destroy them.

8. A temperature of from 98.6° F. to 107.6° F. is most favorable for the development of the bacilli of typhoid fever. Above 113° F. their develop-

ment is impeded and is entirely arrested when the temperature exceeds 122° F.; the bacilli perishing, but their spores preserving their vitality.—*Gazette Médicale de Paris*.—*Med. News*.

### THE EPIDEMIC OF DENGUE IN TEXAS.

From *Daniel's Med. Jour.* (Editorial).—For the third or fourth time within the last few years Austin has been scourged by this distressing, but fortunately, not fatal disease, in epidemic form.

The fact that it is never fatal unless complicated with some other disease, notwithstanding it causes much and intense suffering, loss of time and interruption of business, has perhaps caused both profession and laity to be careless about it, no means whatever being taken to arrest its progress, nor to prevent its introduction.

This season the disease has been of a very severe type. In some instances the attack is ushered in with quite a severe chill; in others it is preceded a few days by a feeling of *malaise* and loss of appetite. In some—young children, principally—the temperature ran as high as 105–106° F., and convulsions ensued. Most cases are attended with an erythematous rash; in some, papulæ, in others, resembling urticaria, but mostly a rash resembling measles. This rash appears, for the most part, on the chest, neck and forearms, and on the face. In some the rash appeared before the fever; in others, after, and still on others, there was no rash. Later in the season the disease assumed a hemorrhagic tendency, and epistaxis and bleeding from the gums were frequent. The suffering is said to be dreadful, and persists a long time after the fever declines; and convalescence is exceedingly slow. Nausea is common, but not a constant symptom. We heard of no case of black vomit. While it is generally thought that one attack of dengue affords no protection or immunity, it does seem to us that there is some protection in having had it; for it has been observed in the present epidemic that the few who have not been attacked this season had the disease last year, or very recently. Some few—our friend Dr. Bennett, the worthy young ex-president of the Travis County Medical Society, among others—have had two attacks this season. When the Doctor came out, his sweetheart didn't know him. Such cases are very rare, however.

It is agreed by all our local physicians that the disease as described in the book does not at all correspond to the disease as it appears in Texas.

In closing this article, we cannot do better than give our readers the following very original essay on dengue (break bone fever), which was written by that good natured, cranky local of the defunct *Minute*, M. B. Davis, while the fever was raging in his blood and he was "too busy" to go to bed. We commend it to our readers, who have never felt the delights he there describes, as worthy of a perusal:

"It is the progeny of morbid parents. Its dam is a night-mare, and its father the blistering witch that strides the blasts, driven from the fens. When the dengue gets hold of a man, he sees his best friends about him, but each one appears to be an enemy armed to slay him. There is in the prevailing type the hide of the jim-jams and the hoofs of despair. If one feels inclined to taste the sweets previously—those that Mr. Talmage declares are in store for everybody except himself—let him try a week of the Colorado river dengue, and he will be willing to exchange. It appears to the sufferer as if the buzzards fly lower, pausing over him, and gazing down wistfully, hoping to witness his immediate calamity. But in such a case death is not a calamity. It is a bottle of ready relief, from which the feverish hands of the stricken man are eager to tear the wrapper. It is said that the insidious creeping of the virus imparted by the rattle-snake causes much distress. When the dengue gets ready to creep, all the creeping things that ever crept run off into their holes and hide.

Dengue beats the chill of the Brazos bottom because it takes away the power to shake, leaving the tendency; and it beats yellow fever, because the latter kills and dengue never does."

## THE QUESTION OF A VITAL PRINCIPAL.

By Mr. THOMAS DWIGHT, of Boston.

From the *Boston Med. and Surg. Jour.*—My proposition is stated in the following syllogism:

Essentially contradictory phenomena (like any other effects) cannot have a common cause.

The phenomena of living and non-living matter are essentially contradictory. — Therefore they cannot have a common cause.

If these premises be granted the conclusion cannot be denied. No one, I think, will dispute the first premise. To do so would be to destroy physical science. The validity of the second premise, that vital and non-vital phenomena are contradictory is, I conceive, the point at issue. The following are some of the respects in which living and non-living matters differ essentially.

(1) *Non-living matter* once at rest remains so till disturbed by some external influence. When in action it tends to transmit its energy to other matter. *Living matter* does not remain at rest, it moves by internal agency and much, probably most, of its activity is exerted on itself.

(2) *Non-living matter* is the same throughout. *Living matter* has distinct parts with particular functions.

(3) *Non-living matter* grows only by accretion, the addition of similar particles. *Living matter* grows by assimilating foreign substances.

(4) *Non-living matter* remains unchanged. *Living matter* grows, becomes old and dies, presenting a regular cycle of changes.

(5) *Non-living matter* cannot reproduce its kind. *Living matter* can.

(6) *Non-living matter* suffers from the influence of the external world. The magnet loses power by use, water wears away the rock. *Living matter* is benefited by action if not excessive. The brain, the eye, the ear gain power by use. Even the resistance of the outer world makes bone, muscle and skin stronger.

Other important distinctions might be mentioned, but these are sufficient to establish the minor premise, and that being done the conclusion is inevitable, that vital and non-vital phenomena cannot have a common cause. The forces of matter being sufficient to account for non-vital phenomena, it follows that something else than matter is needed to account for the vital ones. This shows the impossibility of Dr. Prince's theory, which seems to be that greater complexity of activities can bring forth effects of a higher order, much as (according to his theory) a more complicated watch might think, or perhaps under favorable circumstances, reproduce little watches. Dr. Prince tells us that: "The fact that certain phenomena are observed associated with matter is *prima facie* evidence that these phenomena are due to the forces inherent in matter." I should be glad to know why. Put into syllogistic form his proposition is as follows:—

Phenomena are due by *prima facie* evidence to forces inherent in that with which they are associated.

Vital phenomena are associated with matter.

Therefore they are by *prima facie* evidence due to forces inherent in matter.

Let us change the minor term and see what results. For instance, the phenomena of motion are associated with a machine.

Therefore they are due by *prima facie* evidence to the forces inherent in the machine, or, the phenomena of uniforms are associated with soldiers, therefore they are by *prima facie* evidence due to the forces inherent in soldiers.

## A NEW METHOD IN THE TREATMENT OF THE ALCOHOL HABIT.

By WILLIAM F. WAUGH, M.D., A.M., Prof. of Practice and Clin. Med., Medico-surgical Coll. of Philadelphia.

From the *Trans. of the Penn. State Med. Soc.*, 1885.—The treatment of the immediate effects of alcoholic excess is, on the whole, very successful. Hydrate of chloral and the bromides, singly or in combination, are justly considered the sheet-anchors in the management of delirium tremens; although the propriety of pushing these potent drugs in large doses, in all cases may well be questioned.

But, whatever may be the methods employed, the modern physician rarely fails to conduct his cases of mania-a-potu safely through the dangers of their disease. But what is the net result? The resources of the medical art having been successfully used to relieve the man from the consequences of his acts, after a varying interval he returns to his cups and the same scenes are repeated again until he dies from exhaustion, or from intercurrent disease.

Some years ago I had occasion to ask the question: "Why does the drunkard return to his habits of intoxication?" The popular impression undoubtedly is, that the cause of relapse exists in some vague disease of the brain, induced by the use of alcohol, and which is essentially incurable; once induced remains to torment the unfortunate wretch for the remainder of his days. It is my firm belief that were we to attentively consider the circumstances of each individual case, we would find that the cause is by no means so occult or so deeply seated. Moreover, some cases are undoubtedly cured and the cure is permanent. Among the causes for the recurrence of intemperate habits I have noticed the following:

(1) Previously existing disease which had led to drink. It is a misfortune to a neuralgic when the relief afforded by alcohol is manifested to him. Dyspepsia has caused many a man to become a drunkard.

(2) Overwork; especially when accompanied by ill-health. When a man begins to resort to alcohol to enable him to perform tasks which are above his unaided strength, he is calling the Saxons into Britain; he is invoking the aid of an ally who will certainly one day turn upon him with deadly effect. The most hopeless cases received in our asylums are those which come under this head.

(3) Catarrh of the stomach is responsible for many cases. This is due to the direct effect of alcohol upon the gastric mucous membrane. It is the source of the "next morning headache," the thirst, and the loathing of food in one who is just getting over a debauch. The temporary relief afforded by alcohol in these cases induces many to continue their potations who would otherwise have stopped.

(4) Catarrh of the mouth. Although the gastric catarrh has been generally mentioned by writers it is singular, that none of them have called our attention to catarrh of the mouth. A little observation will show that after a night's drinking the oral mucosa are invariably in a catarrhal state. This causes dryness of the mouth, the secretions of the mouth and salivary glands being suspended. I am convinced that in many cases the desire for drink has no deeper origin than the mouth. My attention was first called to this by the statement of a patient that he could satisfy the desire for a drink by simply gargling with whiskey, instead of drinking it. Inquiry among drinking men elicited the fact that this was becoming a common practice, especially in New York.

(5) The depression due to the withdrawal of the accustomed stimulus is, however, in nearly all cases, a powerful incentive to a relapse into habits of tippling.

The treatment of these varieties must necessarily greatly vary. In the first and second classes the recognition of the cause affords the indication for treatment.

In the third class, namely, that dependent on gastric catarrh, the following treatment has proved most beneficial in my hands: One hour before meals give a tea-cup of hot water in which has been dissolved ten grains of bicarbonate soda. Half an hour later, drop upon the cleansed surface of the gastric mucous membrane, a small dose of subnitrate or sub-carbonate of bismuth, oxide of zinc or oxide of silver. In a few days the catarrhal symptoms will subside. If the digestive fluids be not secreted in a healthy manner, minute doses of rhubarb and ipecac will restore the normal functions more much certainly than pepsin of any sort.

In the fourth and fifth classes I desire to recommend the administration of Erythroxyton Coca. It is useless in the treatment of delirium tremens, but to relieve the depression resulting from the deprival of stimulants it has remarkable powers.

[Since the wide-spread use of cocaine, literature has furnished authenticated cases of *habit* in its use as startling as ever have been related of opium and alcohol.—Ed.]



## OUGHT WE TO PRESCRIBE ALCOHOL AND HOW?

From the *Maryland Med. Jour.* (Editorial.)—An immense amount of prejudice and misconception surrounds the medicinal administration of alcohol as the result of the fact that opinions are influenced more by sentiment than by facts. There are still to be found a few physicians who prescribe fermented wines and ardent spirits for almost every ailment, but, of late years there have come forward a larger number of medical practitioners who deny that alcohol, in any form, or in any quantity, possesses useful medicinal virtues. Those who have lost faith in the therapeutic value of alcohol should endeavor to ascertain whether this result has not been the outcome of a prejudice against the wrong and unwise use of this agent as an intoxicating drink, rather than an observation based upon a study of its medicinal properties.

It is proper also to remind those who use alcohol so freely as a remedy that due consideration should be given to the fact that a taste for alcohol as a beverage may in this manner be stimulated and developed. In the medicinal use of all stimulants and narcotics the danger of provoking a necessity and a habit for these agents should constantly be kept in view by the practitioner.

In a very instructive paper having the title given to this article (*Br. Med. Jour.*, September 5, 1885), Dr. Norman Kerr, of London, a well-known advocate of temperance, discusses the many sides to this question in a way to attract attention and to do good.

Dr. Kerr says: "The dictum that alcohol is always, everywhere and in all quantities, injurious has no warrant from science, or from common sense, and is opposed to the facts. In the present state of our knowledge, such a belief can arise only from the wish being father to the thought. In our recoil from the horrors of intemperance, we are apt to regard alcohol as 'only evil,' and that 'continually;' but, as professors of the art of healing and as interpreters of scientific truth, we have no right to allow our reason to be overborne by our feelings."

In answer to the inquiry, How ought we to prescribe alcohol? Dr. Kerr calls attention to the fact that we should never forget that intoxicating drinks cannot be ordered without some risk of a taste for them being acquired. "We ought," he argues, "in all cases let alcoholic liquors be the last, and not the first remedy, as they are ever fraught with possible danger. Especially we ought not to administer such 'tricky spirits' to reformed inebriates, or to persons who labor under the suspicion of a transmitted alcoholic taint. The whole system of all such is every ready to respond to the lightest touch of the poison, and the smallest sip will often light up an uncontrollable conflagration."

## CELLS VS. BACTERIA.

From the *Med. Times*, Oct. 17, 1885, (Editorial based upon a review by Virchow in his Archives).—The problem in connection with diseases supposed to be due to micro-organisms is a three-fold one: first, the discovery of the parasite; second, the demonstration of its life-history; and, third, the way in which it causes the disease. The controversy is on this last one; and just here we are brought back to the old pathology. Nowhere is this more clearly shown than in the history of phthisis. When Koch discovered the bacillus, there were those who behaved as if all the good work of the past had been useless. As the bacillus was a single entity, so was phthisis; lung-tuberculosis was only caseous hepatization, and gland-tuberculosis scrofula. "In spite of all, pulmonary tuberculosis remains a multiform process, which begins in many ways: sometimes in the mucous membrane of the bronchi, sometimes in the alveoli, and again in the lung-substance, and is accompanied by changes inflammatory as well as tuberculous, and whoever thinks to understand these must learn more than how to stain bacilli."

The battle is between the cells and the microbes,—i.e., between living organisms. At present we know more of the activities and energies of the cells than of the bacteria. Of the great problems to be worked out, one is

the relation of the tissue-elements to the various micro-organisms, and the other is the determination of the distinction between the effects of these bodies and those of the substances they produce. The question of ptomaines has taught us how important the latter aspect is, and curiously enough, the originally botanical problem becomes more and more a chemical one.

The veteran professor believes that we can still walk in the old ways, and that we need no readjustment of science to bring in the new facts.

#### THE BIOLOGICAL EXAMINATION OF WATER.

From the *Louisville Medical News*, October 17, 1885 (Editorial):—The *Lancet*, of September 26th, comments with enthusiasm upon a scheme for testing the sanitary fitness of water, recently developed through the labors of Dr. Koch, in the *Reichs Gesundheits Amt.*; Berlin. A complete account of the process, by Prof. Warden, of the Calcutta Medical College, has been published in the *Chemical News* and reprinted in pamphlet form for further distribution.

The system consists essentially in mixing a known volume of water with "sterilized liquid meat peptone gelatin," counting, after a definite period, the colonies of micro-organisms which develop, observing the extent to which they liquefy the gelatin, and, if necessary, cultivating them in various ways. The utmost possible care is of course necessary in these operations, and special apparatus is required. The paper gives full directions and illustrative drawings, and the importance of the system is well illustrated by Prof. Warden, when he reminds us that a drop of a cholera stool added to a liter of pure sterilized water could not be detected by chemical analysis, whereas the bacteriological examination would "with absolute certainty demonstrate the presence of a comma-shaped micro-organism, while subsequent cultivation would indicate whether the organism was the cholera bacillus or not."

This is certainly *pari passu* with modern doctrines regarding the etiology of contagious and infectious diseases, and as means for the sharp differentiation of the various species of the pathogenic microbes become known, the testing of the sanitary purity of water by the biological method will advance in scientific value and popularity. It can be undertaken, however, only by the expert micro-biologist who can bring to bear upon his suspected specimens and final cultures every check against accidental contamination; who, at the end of the process, can read his results with a practiced eye and estimate the pathological significance of the crop by experience gained through hard labor in many a similar harvest-field.

Indeed it is doubtful, in the present darkness under which lies the question of the nature of the *materies morbi* of diseases known to be transmissible through drinking-water, if even the most expert micro-biologist could do more than say that a given specimen of water is prolific of microbes, some of which may be inimical to health. The bacillus of cholera may perhaps be excepted, but, if so, it only proves the rule.

Now the chemist, inaccurate and unsatisfactory as he knows to be all methods within his reach for the sanitary testing of water, can give an answer quite as satisfactory as this; for, after making all due allowances for leaks in apparatus and inaccuracies in measuring, and discounting his personal equation in estimating by depth of color the amount of albuminoid ammonia down to the third decimal point in fractions of one part per million of the suspected specimen, he can at least say that the water is dirty or clean within or beyond the limit of safety to the drinker. And this testimony, when taken with a view to the surroundings of the water-supply and prevailing zymotic diseases, is of large sanitary significance, resulting under authority in the sealing up of the sources of many an endemic. But since the work of the chemist upon this point is difficult, harassing, and out of accord with the usual accurate revelations of his method, there is little doubt that he will be most happy to turn over to his brother scientist his stock and interest in the testing of water for sanitary purposes.

## CHLORATE OF POTASSIUM AS A POISON AND AS A GARGLE.

From the *Therapeutic Gazette* (Editorial), Oct., 1885:—It is beyond cavil that the chlorate of potassium is an active poison; the smallest amount of it which will produce death is scarcely known, but in most of the cases of fatal poisoning reported in the adult the dose has been over half an ounce; a drachm of it has killed an infant a year old.

The symptoms of poisoning are fairly uniform. In the rapid cases there has been violent vomiting, profuse diarrhoea, excessive dyspnoea, a great failure of the heart's action, and marked cyanosis. In most of these cases the blood has been found of a chocolate color. In the subacute cases the gastro-intestinal symptoms have been severe, with general vomiting of blackish green matters and distinct swelling of the liver and the spleen. The urine is markedly lessened in quantity, albuminous, often of an opaque reddish-brown or blackish color, showing under the microscope brownish or yellowish-brown tube-casts, often containing the detritus of blood-corpuscles. Hæmoglobinuria has been noticed, and methæmoglobin is a common constituent of the urine. The nervous symptoms have been severe delirium, coma, tonic and clonic cramps, and a peculiar stiffness of the extremities. Headache, loss of appetite, violent pains in the abdomen and other portions of the body, and marked abdominal tenderness have usually preceded the loss of consciousness. Not rarely upon the surface of the body are there minute small ecchymoses, and even more frequently there is a general jaundice. In some cases the patient has rallied and seemed to be on the road to recovery, then the fatal relapse occurred.

The effect which the drug has upon the kidneys makes its internal use especially dangerous in cases of diphtheria and scarlet fever, and we have no doubt that its too free employment has added very seriously to the mortality of these diseases. It certainly has no direct influence upon these diseases; has no value whatsoever in their treatment save only for the slight effect which it has upon the sore throat, and if given at all should be administered with great caution, and in only very small doses.

The local use of the drug has been conceived to be harmless. In ordinary sore throats, used three or four times a day as an ingredient of a gargle, the drug is an efficient one, and the small quantity of it that will be swallowed may be of service. It should be remembered that it is very freely eliminated by the salivary glands, so that when it is taken internally the parts about the mouth and throat are continually bathed in its dilute solution. It is in this way by a perpetually local effect that it is useful in ulcerated stomatitis of children. When, however, as in a bad case of diphtheria or scarlet fever, the whole mucous membrane of the throat is covered with thick exudate, it is to our mind absurd to think that the chlorate of potassium is of appreciable value.

## MEDICAL ETIQUETTE.

By C. C. FRANCIS, M.D., Cleburne, Texas.

From *Daniel's Texas Med. Jour.*, October, 1885:—Another ingenious and oft practiced method of those who hope to rise upon the downfall of others, is very frequently resorted to by this class of men. Well, Dr. A., what do you think of Dr. B., who has just settled in our town? With a knowing look and half sarcastic smile, he replies: W-e-l-l, I d-o-n't k-n-o-w. I should think he is rather young yet, to be skillful. He'll do very well for simple diseases, such as chills and fever. I don't think it would be safe to risk him in a bad case; he may make a good doctor when he gets age and experience. Well, there is old Dr. C., who has settled in our midst, what sort of a doctor is he? Oh, well, you can see for yourself—probably he's been a good doctor in his day—he's a regular old fogey—hasn't kept up with the profession. I'd be afraid to risk him. These and other similar remarks, together with direct and indirect insinuations resorted to by this class of medical men, are easily caught on to by the ignorant masses, and especially by some knowing

old woman, of which nearly every neighborhood is the happy possessor. They "roll it as a sweet morsel under their tongues;" no opportunity is lost, not only to perpequate what Dr. A. has said about Drs. B. and C., but exaggerated statements are made. The bold, embrazoned, unprincipled Dr. A. stands before the community as a man of great sagacity and wonderful medical attainments, while the quiet, honest, conscientious, worthy physician, is sacrificed upon the altar of justice, at the hands of an ignorant and misguided community.

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#### DIABETES MELLITUS.

Dr. S. SMITH, Germantown Hospital, Philadelphia (*Med. News*, Nov., 1885), reports nine cases treated with Clemen's solution—arsenite of bromine—with the most satisfactory results. Three drops, three times a day, increasing to five drops.

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#### HYDROCHLORATE OF COCAINE.

Dr. JEROME K. BAUDY, of St. Louis (*N. Y. Med. Jour.* Sept., 1885), says, the only caution to be observed in these cases is to *administer the drug hypodermically, and this by the hand of the physician himself*. This I particularly insist upon. The drug should not be known to the patient, nor the amount of the alkaloid which is being given. If these precautions are not adopted there is great danger—nay, a certainty—that a *cocaine habit* will be formed, more disastrous in its results than alcoholism or morphinism.

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#### DISEASES OF THE NERVOUS SYSTEM.

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##### EXOPHTHALMIC GOITRE.

By EDWARD T. BRUEN, M.D., Phys. to the Hosp. of the Univ. of Penn.

From the *Boston Med. and Surg. Jour.*—This woman has the three salient symptoms which differentiate her disease as exophthalmic goitre, or Graves' disease. We recognize the lustrous protuding eye-balls, the enlarged thyroid, and the rapid action of the heart. The three symptoms which have been noted are characteristic, and distinguish this case from simple enlargement of the thyroid body or goitre. This is pre-eminently a disease dependent upon disorder of the vaso-motor and cardiac nervous systems. The protrusion of the eyes is supposed to be due to dilatation of the blood vessels in the orbit, or to the contraction of the involuntary muscular fibres in the orbital membrane which covers the spheno-maxillary fissure, or both causes combined. The enlargement of the thyroid is due to dilatation of the blood vessels which are liberally supplied to that gland, though increased formation of tissue in its substance may occur. The excited action of the heart which is usually unconnected with organic disease is to be explained by a stimulation of the accelerating nerve; and this as well as the alteration of the nerves of the orbit has been ascribed to disease of the lower cervical sympathetic ganglia, in which increased connective tissue and diminution of ganglionic cells have been observed. Exophthalmic goitre is a disease which is very much increased by momentary excitement.

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##### THE INSANITY OF MASTURBATION.

Dr. C. B. BURR tells us in the *Cinn. Med. News* that about ten per cent. of all the patients at the Eastern Michigan Asylum suffer from this form of disease, and he thus formulates the delusions and peculiar manifestations which he regards as characteristic of this form of insanity:

(1) An intense vanity and self-love. (2) Extreme selfishness and disregard for others. (3) Religious delusions and perverted moral sentiments. (4) Delusions referable to the sexual system. (5) Hallucinations of sight and hearing of a certain definite character. (6) Emotional disturbances. (7) Homicidal impulses and a disposition to commit sudden acts of violence. (8) Certain physical disorders referable to an impaired state of the nervous system.—*Med. and Surg. Reporter.*

### THE TREATMENT OF WRITERS CRAMP.

By B. P. ROBBINS, M.D.

From the *Proceedings of the Phil. Co. Med. Soc.*—There are three factors in the treatment of writers' cramp, or, indeed, of any of these analogous conditions of incoördination, which are met with in tailors, telegraphists, pianists, milkers, and others. One of these factors is essential, the other two are simply effective methods of local stimulation. I refer to rest, electricity, and massage. I will speak of these *seriatim*.

1. Your patient must have absolute rest, not necessarily of the whole body, but absolutely and entirely of the affected muscles, as far as those particular movements of coördination are concerned, whose abuse has brought on the attack. It is necessary to be very firm in demanding this element of treatment from your patient—various objections will be urged; the disease is to be met with amongst a class of men upon whose pen depends their livelihood—to suggest rest to them is to suggest starvation. Your only answer can be the unfavorable prognosis which is unchangeable in all cases where you cannot secure this factor. I have no hesitation in saying that no case can possibly recover, unless time be given to the degenerated nerve-centres to regenerate themselves, and that they assuredly will not do if the demand upon their functional activity continues. In some cases I have been accustomed to order the arm to be carried in a sling for a week or so, to remind the patient that all writing is to be shunned; with the majority of patients this suggestion will be unnecessary; of course, I need hardly add, any other coördinative movement, involving the same group of muscles, may be indulged in with impunity.

2. Electricity is an important factor in the treatment, but I do not regard its use as absolutely necessary in simple uncomplicated cases, when taken early enough. I believe, however, that it hastens recovery, and therefore should always be employed. The continuous, and not the faradic, current should be used. The latter has been a favorite amongst the Germans, so high an authority as Dr. Erb sanctioning its use; but I am inclined to think, with Dr. Poore, that the best results are most certainly obtained by the employment of the continuous current. A weak faradic current may be strong enough even to destroy the electric irritability of the worn out muscles in writers' cramp. Galvanism, to my mind, offers the safest and best mode of electrical treatment, and one which, in favorable cases, is sure to be followed by good results. The current should not be so strong as to cause muscular contraction, but should produce a slight tingle at the ends of the fingers when the circuit is made or broken. It should be used every day for the first fortnight; after that time the séances should be gradually diminished in number until the end of the second month, when they may be discontinued in a typical case where recovery progresses without intermission. But the disease varies so much, some cases yielding easily to treatment, and some proving so unreservedly obstinate, that it is hard to lay down an iron-clad rule with regard to the administration of the electricity. Concerning the method of its administration, I think the suggestions of Dr. Poore so admirable that there seems no good reason for departing from his manner of treatment. He says:

"One pole (the positive) is placed, let us say, over the axilla, and the other over the ulnar nerve just where it leaves the biceps muscle en route for the olecranon. The strength of the current is short of that which causes muscular contraction, but is just sufficient to make the patient con-

scious of a tingle in the end of the little finger when the circuit is made or broken. The patient is made to exercise the interossei by separating and approximating the fingers rhythmically. Take another example: The positive pole may be placed over the median nerve at the inner border of the biceps, and the negative over the body of the flexor longus pollicis, while the patient is made to flex rhythmically the distal phalanx of his thumb; or, again, the positive pole may be placed in the axilla, and the negative over the musculo-spiral nerve as it turns forward alongside of the supinator longus, just above the bend of the elbow; and the patient is then made to supinate the hand or extend the fingers rhythmically.

Of course, this plan laid down by Dr. Poore is subject to variation, but the general scope of treatment by electricity which he suggests should not be departed from. Dr. Erb, indeed, advises galvanization of the head, cervical sympathetic and cervical cord. This does not seem to me to be necessary, but there is no reason against its employment.

3. I approach the subject of massage in the treatment of these professional over-movements with considerable diffidence, because of the extravagant claims which have been made for it, as a curative agent in these diseases; yet I must say that the statistics, which have been published both in America (by Dr. Douglas Graham in his *Practical Treatise on Massage*) and abroad by different observers who have employed the method of Wolff, are very strong in favor of its use. It is claimed that Wolff has cured at least fifty-four per cent. of the cases of over-movement which have come under his care. His method is indorsed by many leading Continental specialists, Charcot amongst others, and since his sojourn in England, so lately as January of this year, Dr. de Watteville has reported several cases which he submitted to Herr Wolff, and whose treatment resulted in a cure. Briefly, Wolff's method "rests exclusively upon active and passive gymnastics of the fore- and upper-arm, upon massage, percussion, and friction of the same parts, and after a time elementary exercises in writing, prescribed and adapted to each case by holding the pen in a definite manner. These are gone through with two or three times daily for half an hour or so at a time."

I need hardly add that when massage is employed, and it should always be employed when the means of the patient will admit of it, it should always be entrusted to a skilled manipulator; no course of shampooing, rubbing, or other manipulation by the patient or the physician can take the place of the operations of a trained masseur.

When there is a depressed condition of the general nervous system, strychnia may be employed with advantage in these cases. I have also found the acid phosphates (after Dr. Pepper's formula—see *Tyson on Diseases of the Kidney*) a very valuable tonic. Calisthenics, addressed to the development of the affected muscles, are also of some value.

#### ALCOHOLIC PARALYSIS.

The immediate and transient effects of an excessive amount of alcohol upon the human nervous system, whether they are manifested in the form of drunkenness, or of delirium tremens, or of an acute attack of insanity, are well known. Scarcely less evident are the effects produced upon the nervous system by a less excessive but a more prolonged abuse of alcoholic drinks. These effects may be manifested either in a general failure of mental and physical power, or in a form of disease closely resembling progressive paralytic dementia, or in various forms of chronic insanity, or in epilepsy, or in neuralgia, or in paralysis. In the acute form of alcoholic poisoning, no change in the structure of the nervous system has been found, except that the meninges in common with the internal organs and the mucous membranes are the seat of a very decided injection and of a slight exudation. In the chronic form of alcoholism, a number of pathological changes have been discovered in the nervous system, which, however, vary greatly in different cases.

Of late years the paralysis which results from the abuse of alcohol has been accurately described by numerous observers, and the attempt has been made to discover the lesion of the nervous system which is associated with this form of paralysis. Two cases which are reported by Dr. Henry Hun, of Albany, in the *American Journal of the Medical Sciences*, for April, 1885, are typical examples of this disease, and contribute to a better understanding of it.

Dr. Hun has collected the recorded cases of alcoholic paralysis, and from their study he holds that we are justified in regarding it as a special form of disease with the following symptoms: After a number of cerebral and gastric disturbances due to the alcoholic poisoning the symptoms of the disease proper commence with neuralgic pains and paresthesiæ in the legs, which gradually extend to the upper extremity and which are accompanied at first by hyperesthesia, later by anesthesia, and in severe cases by retradation of the conduction of pain. Along with these symptoms appears a muscular weakness which steadily increases to an extreme degree of paralysis, and is accompanied by rapid atrophy and by great sensitiveness of the muscles to pressure and to passive motion. Both the sensory and the motor disturbances are symmetrically disturbed and the paralysis attacks especially the extensor muscles. In addition to these motor and sensory symptoms there is also a decided degree of ataxia. The tendon reflexes are abolished, and vaso motor symptoms, such as edema, congestions, etc., are usually present. Symptoms of mental disturbance are always present in the form of loss of memory, and in transient delirium.

The lesion is in all probability a degeneration of the peripheral nerve fibers and of the nerve cells in the cerebral cortex, together with a chronic congestion or inflammation of the pia mater. This lesion explains well the symptoms, although it is certainly curious that alcohol should not attack the spinal cord, but only the highest and lowest part of the nervous system, if one may so call the cortex of the brain and the terminal branches of the peripheral nerves.—*Louisville Medical Press*.

#### THE CAUSES AND PREVENTION OF INSANITY.

From editorial *Med. and Surg. Reporter*.—The causes and prevention of insanity (says Dr. D. Yellowlaus before the *British Medical Association*) may well be considered together, for prevention can be intelligent and effective only in proportion as the causes are accurately ascertained and wisely avoided.

While we are quite ignorant as yet of how these causes intimately act, and while our pathology of insanity is in swaddling clothes, yet we possess quite a good knowledge of the predisposing and exciting causes, and so therefore possess the means of warding off, to a certain extent, this dire calamity.

While brain injuries from a fall or a blow may sometimes be responsible for mental alienation, yet Dr. Y. thinks friends are wont to attach too much importance to this cause, in their anxiety to disprove hereditary influence, especially when long periods of time have elapsed since the receipt of the injury and the development of the disease, without the manifestations of any untoward symptoms.

The question of overwork is dwelt upon and its evils strongly drawn; but far commoner than exhaustion from this cause, says Dr. Y., is the irritation and exhaustion produced by excesses in the two most frequent forms of alcoholic and sexual dissipation.

"A man need not be a drunkard before he can develop insanity or transmit to his offspring. If he indulge in 'nips' throughout the day or saturate himself with beer, or cannot go to bed without his grog, he is steadily creating constitutional tendencies which will some day develop evil results."

Attention is called to the fact that the marriage relationship can be degraded into an excuse for unbridled indulgence, and that such folly or ignorance may wreck the strongest brain.

Society needs plain words about these things, and we fail in our duty if we do not speak them. Especially do we need to impress on parents the duty of wisely informing their children, lest ignorance, or, still worse, knowledge wrongly sought for, prove fruitful of evil.

Brain starvation from malnutrition or undue waste, and brain irritation due to disease in some other organ, are prolific causes. But Dr. Y. considers that an inherited predisposition to insanity is the most potent of all the causes that produce it, and he issues a ray of consolation to those thus threatened when he says that this predisposition is not a mysterious and fateful doom, haunting and dogging its victim, and sure one day to overtake and overwhelm him. It is a purely physical condition, and loses half its horror when this is realized.

The first condition of brain-health, as it is the first condition of the health of every organ, is due and suitable exercise. If the brain-word be unduly prolonged or unduly severe, injury must follow. Therefore our imagined patient must not pore unremittingly over the merchant's ledger, nor burn the midnight oil in exploring the arcana of science, and we must absolutely debar him from the rivalries of politics and the excitement of the stock exchange. Unwonted responsibility or undue worry tax him injuriously, and he should work within accustomed limits, and along familiar grooves which habit has made smooth. His ambition must be controlled by prudence, and he should be a servant rather than a master, and he should choose the calm and even tenor of a country life rather than mix in the rush and excitement of a great city.

Daily self-control, and wise moderation in all things, should characterize every one; but they are specially required in one predisposed to insanity, and they must be earnestly cultivated by him till they acquire the blessed ease of habit, and are practised without an effort.

Referring to the question of marriage, Dr. Y. says that it is a grave one in these cases. If the predisposition be but slight, and of remote origin, it seems hard to forbid marriage; but we can urge that the partner selected should be of calm and well-balanced mind, and free from all nerve-proclivities. Unfortunately, excitable, unstable folk have an attraction for each other as remarkable as it is unwise. If the tendency be marked, the prohibition should be absolute. It is far better to endure isolation, and to miss the comfort and solace of married life, than to bring sorrow on others, and unknown ills upon offspring. To choose a partner beyond the age of child-bearing is one way out of the difficulty; but choice in these things is guided by feeling rather than by judgment, and love is so blind and persistent that our wisest counsels are often disregarded.

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### SLEEP.

Dr. J. L. TEED, in the *Kansas City Medical Index*.—Although not a function of the mind, yet so closely connected with mental action as not to be passed by unnoticed, is the condition known as sleep. In the natural condition we sleep about eight hours in the twenty-four. It requires that length of time for the brain to recuperate, and to replace the substance it has lost by the discharge of its functions through the other sixteen hours. In disease it frequently happens that the faculty of sleeping is lost, and then the brain being constantly in activity, wasting its substance without repairing it, exhaustion is soon produced. With the continual decrease in its substance is an increase in its watery constituents, and with this an increased excitability with less power to act. As the exhaustion of the nerve substance and the nerve force goes on, the irritability increases and the strength decreases; that group of symptoms collectively designated as typhoid appear, and unless soon checked the disease terminates fatally. This condition is well exhibited in traumatic delirium when sensation is abolished, so that the patient will try to hobble round on his stumps shortly after an amputation. In this case it is induced rapidly—in slow fevers it is induced slowly.



Whenever the brain is largely supplied with fresh arterial blood, wakefulness is the result. Whenever a fair supply of fresh arterial blood is prevented from reaching the brain cells sleepiness is the result. Fresh arterial blood may be excluded from the brain in several ways; as by an anæmia, when the blood supply is scanty for every part of the body—by the compression of the carotid artery from any cause—or of the vertebrals—by compression of the veins preventing the blood from leaving the brain, and therefore rendering the entrance of fresh blood impossible. In the last case the amount of blood in the brain is excessive, but is all venous blood, surcharged with carbonic acid, poor in oxygen, and containing a large quantity of effete matter. Thus, while the brain is congested, it receives no supply of fresh arterial blood. The sleepiness in this case may pass on to stupor, and from that to coma, these being advanced stages of the same condition.

### A UNIQUE CASE OF CHOREA.

By JAMES WEIR, M.D., of Louisville, Ky.

From the *Louisville Medical News*, October, 1885.—Eddie B., aged twelve years and two months, was sent me, August 28th, for treatment by Dr. Trunnell. The doctor had diagnosed chorea, and upon examination I confirmed his diagnosis. Upon stripping him for physical examination a most beautifully developed condition of the whole body showed itself. Ever muscle was in proportion, the *tout ensemble* presenting the appearance of the Farnese Hercules in miniature. He stood firmly on his feet, without a muscle of his upper or lower extremities or trunk showing a single tremor. His father told me that he had slight volitional control over his paroxysms, and that when under observation did not show evidence of his disease. Furthermore, that "the snapping of his eyes and the popping of his mouth was all that bothered him." I directed the boy to put on his clothes, watching him the while. Suddenly a contraction of the *zygomaticus major* on the left side drew the corner of his mouth almost to his ear, at the same time the *orbicularis palpebrarum levator palpebras superioris* and *corrugator supercilii* were in violent and continuous action. I immediately recognized chorea limited to the muscles of the face, a rare and infrequent form of this affection. After study of the case showed me that the muscles involved other than those above mentioned were the *levator labii inferioris*, *orbicularis oris*, and *buccinator*. As far as I could determine the motor branches of the fifth as well as certain branches of the third and seventh pairs of nerves were involved. There was absolutely no sensory involvement. There was no mental impairment, no hallucinations, no dreams, and no involuntary action of the sphincters. I gave the father a favorable prognosis, and the progress of the case has justified my opinion. Under large doses of pil. ferri. carb. and liq. potass. arsenitis, with five minute *séances* of faradic and galvanic currents, I have gotten rid of the choreic paroxysm in every muscle involved save the *levator labii inferioris*.

### DISEASES OF THE ORGANS OF RESPIRATION.

#### RULES FOR THE HYGIENIC TREATMENT OF PULMONARY CONSUMPTION.

By BENJAMIN WARD RICHARDSON, M.D., LL.D., F.R.S., Etc.

From the *Sanitarian*, September, 1885.—Rule I.—A supply of pure air for respiration is the first indication in the treatment of the consumptive patient. Above all things, the consumptive person should be the sole occupant of his own bed and bedroom. To place such a one for several hours close to another person, however healthy, is injurious to both, but especially to the sick. No ties of relationship, and no mistaken kindness, should cause this rule of isolation ever to be broken.

Rule II.—Active exercise is an essential element in the treatment of consumptives.

Rule III.—An uniform climate is an important element in the treatment of consumptives.

Rule IV.—The dress of the consumptive patient should be adapted to equalize the temperature of the body, and so loose that it interferes in no way with the animal functions.

For the consumptive, flannel clothing is always required, and it should cover the whole of the body.

Rule V.—The hours of rest of the consumptive patient should be regulated mainly by the absence of the sun.

The natural hours of sleep are from sunset to sunrise, and it is the business of the consumptive to make nature his oracle.

Rule VI.—The occupation of the consumptive patient should be suspended if it is in-door or sedentary; but a certain amount of out-door occupation may be advantageous.

Rule VII.—Excessive mental exertion should be avoided by the consumptive.

I have seen so much mischief arise from overwork of the mind, in consumptive children and youths, that I have dwelt no longer than is necessary in treating on the importance of the present rule. If I had a child of decidedly consumptive tendency, he should scarcely touch books at all. He should be taught orally as much as possible.

Rule VIII.—Cleanliness of body is a special point in the treatment of consumption.

Rule IX.—Abstinence from all habits of gross sensual indulgence is an essential part, both in the prevention and the cure of consumption.

Rule X.—The diet of consumptive patients should be ample, and should contain a larger proportion of the respiratory constituents of food than is required in health.

The quantity of food taken by the consumptive person should be small at each meal; but the meals may, if the sensations of the patient require it, be more frequent than in health. Of animal foods, mutton is the best. Fatty and oily foods, which constitute the respiratory class, should predominate, and fresh butter, with bread, may be taken almost *ad libitum*, so long as it agrees with the stomach. Cream, too, is excellent, and the luxury of curds and cream is very suitable. Milk, whenever it suits, is advisable as a constant drinking food, and good cows' milk, new, answers every purpose. There are, as far as I can gather from numerous cases in which I have seen them tried, no specific virtues in asses' milk and goats' milk, as some have supposed. Tea may be taken, in moderation, with perfect safety. Fresh vegetable diets should not be omitted; and fruits, especially roasted apples, are always admissible, except in instances where they excite irregular action of the bowels. The Iceland moss has had a great reputation, as have jellies of different kinds, but these often are slow in digestion, and have no specific value.

The question of the use of alcohol in consumption is one on which scientific opinion is much divided. I have recommended alcohol under some conditions of the disease, and I have shown, on the other hand, that one particular kind of consumption may be produced by indulgence in alcohol. Of late years I have prescribed alcohol very sparingly, and never in the form of pernicious mixtures in which it is sold for general use under the names and forms of alcoholic beverages. When I now prescribe it, it is purely as a medicine and in the form of alcohol itself, properly measured, properly diluted, and properly timed.

The two indulgences of snuff-taking and tobacco-chewing out to be strictly avoided by the consumptive.

Reviewing what has been thus written, I would add, as a supplement to the ten rules submitted, that whenever distinct evidences of phthisis have set in in an individual of either sex, the marriage of such a person is wrong, if not inexcusable; while the marriage of two persons, both the victims to the disease, is opposed both to reason and humanity.

## THE HOME TREATMENT OF PHTHISIS.

By F. C. SHATTUCK, M.D., of Boston.

From the *N. Y. Med. Jour.*, Sept., 1885:—The consideration of the treatment of phthisis falls naturally into two great divisions, the hygienic and the medicinal; let us take up the more important first, including under hygiene food, morals, fresh air, rest and exercise, dress, and bathing.

Phthisis (or the tubercular bacillus, if you will) resembles one of those weeds which grow only on poor or neglected soil, but it also exhausts completely what measure of virtue the soil may have; hence, by every means at our disposal, we should seek to improve the general health of our patients, that we may aid nature in choking out the disease. The key to the position in the present state of our knowledge is in attention to digestion. A patient of mine, a brilliant example of complete recovery, said to me: "As long as my stomach held out I was not very anxious." Every consumptive should eat the maximum amount of nourishing food which he can digest—which he can digest, let me repeat—for, as Lauder Brunton pithily says, we should always remember that food within the gastro-intestinal tract is still practically outside of the body. There are general laws of dietetics, and we know how long it took the stomach of St. Martin to deal with many different articles of food. Certain materials and certain methods of preparation agree better than others with the majority of mankind; but in dealing with patients we give our advice to individuals, not to men or classes of men collectively. In dietetics, as in a Western mining camp, every man is in large measure a law unto himself. Our distinguished member, Prof. Flint, says, in writing of dyspepsia, that sufferers "must follow the dictates of instinct rather than any precise rules." I was delighted to find this warrant for the assent which my far more limited experience has led me often to accord to the request of patients, and particularly consumptives, for special articles of food, however bad the reputation of such articles as regards digestibility might be; never in the case of a consumptive have I had reason to regret the indulgence. I think we are perhaps oftener called upon to give minute directions as to the frequency with which food is to be taken than as to the form which it is to assume. Much more work can often be got out of the stomach without remonstrance by five, six, or seven light meals a day than by three heavier ones. A glass of milk or the like, with or without a raw egg, and a little alcoholic stimulant, midway between meals and at bedtime, may be of more service than anything contained in the drug-shops; and a cup of hot bouillon, as soon as possible after waking, will carry a patient over his morning cough, bath, and toilet, with a good appetite for breakfast. I have repeatedly seen this simple expedient make a great difference in the comfort of the whole day.

Alcohol, in such form and quantity as careful observation of the individual patient shows is best tolerated, is indicated in most, though not in all, cases. Any toxic effect is to be avoided, and the influence on the appetite and digestion is to be watched.

With forced feeding after the manner of Debove I have no personal experience, and dismiss the subject of diet with the repetition of the axiom that in phthisis the physician should see to it that his patient takes all the nourishment he can digest.

The moral management of the case requires a few words. Here there is scope for the most delicate tact and the most intimate knowledge of human nature. Some patients need to be frightened, some to have their fears allayed. Let science clarify and sharpen our vision; let it not render us so hypermetropic that we do not see distinctly the individual in the patient before us. I think we are sometimes inclined to forget what a powerful therapeutic agent prognosis may be. Let us give the patient the benefit of every doubt, remembering that the prognosis represents our opinion, not inevitably the truth. An unfavorable opinion should often be reserved for a near and judicious friend, if the patient be so fortunate as to have one. All patients are not so tenderly considerate of their physician's mistakes as was the young lady who recovered after she was given up by her doctor, and

ever thereafter, when she met him, blushed for shame. Occupation is another branch of moral treatment which must not be lost sight of.

Dress need not detain us long. Consumptives are apt to err on the side of too many and too heavy clothes, keeping the skin in perpetual action and wearying the body by mere weight. Let the consumptive wear wool or silk next the skin from the neck to the toes, and let him change them frequently.

Too much stress can scarcely be laid on the importance of fresh, pure air. The apartments occupied by the patient should face the south if possible. An open fire of wood or soft coal should be kept up in the living-room if possible, and ventilation should be carefully provided for.

We should insist on out-door exercise in such degree and form as the strength of the patient, the length of his purse, and the season will allow. Driving should, if possible, be in an *open* vehicle, which for a weak person should have a high back, and in windy weather a veil or a respirator should be worn by the occupant.

There is a popular idea that there is something about the night air which is particularly dangerous to consumptives—an idea which, like many of those bearing on medicine and current with the laity, probably came originally from the profession, which advances in knowledge faster than the public. The night air is all the air there is at night, and in non-malarious regions the danger of going out in the evening does not lie in the quality of the air, but in the fact that persons are at that time often tired and, consequently, more sensitive to alterations of temperature, or any other demand upon the vital forces; the bearing of this observation is sufficiently patent.

The character of the employment of the consumptive is also to be borne in mind, and an out-of-door occupation, involving no severer toil than the patient can stand, should be followed if possible. Too often this is impossible; but we must do the best we can under the circumstances.

Patients who are too weak to take any active exercise often derive great benefit from a sun- and fresh-air bath. In the country a little shed can be built, open toward the south and sufficiently deep to keep off the wind from the patient sitting in a chair or lying on a mattress. In the city an easy-chair can be placed near a widely-opened southerly window. The invalid should have as many blankets or robes as he wishes. No matter how low the thermometer, if the sun shines brightly there is rarely any difficulty in keeping warm, and a small sun-shade or similar contrivance is often needed to protect the head. No artificial heat has the penetrative power of the sun.

### THE TREATMENT OF NASAL CATARRH.

By NATHAN JACOBSON, M.D., Syracuse, N. Y.

From *Gaillard's Med. Jour.*:—To successfully treat so-called "nasal catarrh," there must be, first, a proper examination of the nares, anteriorly and posteriorly; second, an appreciation of the existing pathological condition; and, third, treatment based upon scientific principles to relieve the diseased state in each individual case.

If "nasal catarrh" be an American affection, as Dr. Mackenzie would wish us to believe, we can point with pride to what Americans have accomplished in the way of its treatment. The past ten years have seen almost a complete revolution in the methods of treatment. To these the scope of this paper permits only this general reference.

But it may be asked, What harm comes to the patient if these conditions are allowed to continue, and no radical treatment be instituted?

The hypertrophied tissue occluding the nares will render proper nasal respiration impossible. The pharynx will become dry. The air, unprepared for pulmonary respiration, unmoistened, and laden with dust and impurities, is well calculated to produce various disturbances in the respiratory tract.

Atrophic disease leads to ulceration and affections of the cartilaginous and bony structures of the nostrils, while the resulting decomposing products impregnate conjointly the inspired air, impair the general health, and may produce, as Cohen has pointed out, septic poisoning.

Follicular disease of the naso-pharynx, adenoid growths upon the pharyngeal vault, hypertrophy of the inferior turbinated bones, produce more or less interference with respiration, impair the senses of taste and smell, alter the voice, produce impairment or loss of hearing, rendering singing perhaps impossible, frequently cause and often prevent the cure of catarrhal diseases of the eye, create a capricious appetite, lead to general mal-nutrition, increase the susceptibility to diphtheria, scarlatina, and other diseases manifesting themselves in the throat.

It is believed that "hay fever" is developed only in persons suffering from hypertrophied disease of the turbinated bones, or some form of naso-pharyngeal catarrh.

It is a popular belief that "nasal catarrh," untreated or uncured, may lead to consumption. That a close relationship exists from between the nares and the lower respiratory tract is apparent. The various forms of laryngeal catarrh cannot be cured while catarrhal diseases remain active in the nares. Hypertrophied disease of the turbinated bones and nasal polyps have each been known to cause asthmatic attacks. Irritable points in the nostrils may keep up a constant cough. Yet to determine whether consumption can really be produced after this manner, may require further investigation and careful observation.

Flint expresses the belief that the opinion held by some, that chronic pharyngitis has a tendency to produce or may eventuate in pulmonary tuberculosis, is erroneous. In fact, he thinks that it denotes rather a condition unfavorable to phthisis.

On the contrary, a host of specialists in laryngeal and pulmonary diseases hold to the ground which Beverley Robinson expresses as follows, "Hence" (speaking of naso-pharyngeal catarrh) "comes, I am now thoroughly convinced, the neutral stage, in certain instances, of what afterward develops into different forms of pulmonary phthisis. Of these the purely catarrhal is by all odds the most frequent. Nevertheless, I am satisfied that such patients occasionally develop military tubercles, which had previously remained latent or unsuspected."

To this last clause I wish to take exception and say, rather, that as we now believe military tuberculosis to be of bacillic origin, so-called nasal catarrh unquestionably prepares a proper soil for its easy cultivation.

Aside from the effects upon the general system already mentioned, various remote disturbances, like chorea, reflex epilepsy, gastric troubles, retarded development, mental depression, and so on, have been observed to result from "nasal catarrh."

That very serious consequences may follow the improper treatment of the various nasal affections called catarrh, must be clear. These affections prevail over extended sections of our country to an almost alarming extent. They have been neglected more often than properly treated. The serious consequences of this neglect should occasion more than passing alarm.

They demand from every physician who pretends to care for them an appreciation of the true condition and an enlightened and scientific treatment.

## COLDS.

By GEORGE G. GROFF, M.D., Lewisburg, Penn.

From the *Southern Med. Record*:

*How to Avoid Colds.*—Dress the body warmly, and throughout all cold and changeable weather dress the whole body in warm flannel. Keep the pores of the skin well open by frequent bathing. Breathe through the nose. This is an important matter. Avoid draughts of air. Don't live in a close, stuffy, overheated room. Keep the back, especially between the shoulder blades, well covered and warm. When about to make a journey, put on extra clothing. Always be covered when asleep. Eat heartily. Do not reject a due proportion of fatty foods. Keep the body well nourished.

After speaking, put on an extra coat, and if you are going out into the cold air, protect the throat, and while in the open air use the voice as little as possible.

Wear overshoes in all damp and sloppy weather. These should not be worn indoors.

Change wet clothing as soon as possible after entering the house. While at work one can wear wet clothing, but never when sitting down or standing still. This precaution is very important.

Never go to bed with cold or damp feet. Never take warm drinks freely just before going into the cold, wintry air. Never begin a journey before the breakfast has been eaten. Don't sit at an open car window on a cold morning, or if you are in a heated state.

Never sit on a damp cushion, on the damp ground, or on a cold marble or stone step, if you wish to avoid sore throat or colds.

The best lung protectors are dry feet and comfortable body clothing, no exposure, and no late suppers or dissipation. The aged and young children should be provided with extra clothing and warmth.

To recapitulate: To avoid colds, keep the body warmly clad, clean and in pure air as much possible, laugh, be cheerful and generous.

*Home Treatment of Colds.*—Many say, "Do nothing," "It will cure itself," etc. But to cut a cold short several days is worth a good deal, when it can be readily done at commencement. If the person has full control of his time, there is nothing better than a large bowl of hot ginger tea, to be taken at bedtime, and then the patient to be warmly tucked in bed. If the person is liable to be called up in the night, it will not be safe to try this treatment. A warm bath is also beneficial.

The eliminating organs may properly be excited by unirritating remedies, as liquor ammoniæ acetatis, citrate of ammonia, citrate of potash and chlorate of potash. Dr. L. Beal, of London, recommends the following: *R.* Liquor ammoniæ acetatis,  $\mathfrak{z}$  ij; spiritus chloroformi,  $\mathfrak{z}$  ij; potassæ nitras, grs. lx; syrup of squill,  $\mathfrak{z}$  ss; aquæ,  $\mathfrak{z}$  vj. *M.* Dose: a tablespoonful in an equal amount of water once in two hours, or less frequently, for three or four days.

Or nearly as good will be: *R.* liquor ammoniæ acetatis,  $\mathfrak{z}$  ij. *Sig.* Dose: a table spoonful every three hours during the day in a wineglass of water. Or five to ten grains of Dover's Powder may be taken on going to bed.

Purgatives are also beneficial. Many find decided relief from a small dose of Rochelle salts.

The dry treatment has been much praised. In this method, the patient, as nearly as possible, abstains from all fluids or drinks for several days. The cold is said to be shortened, but the cure is nearly as bad as the disease. A more rational plan of treatment is to drink largely of water and warm drinks. This plan is recommended by Dr. Beal.

The opium treatment is used in England. Put into a glass of cold water 20 to 30 drops of laudanum. Sip it slowly for an hour or more, and then retire to bed and cover up warmly.

A drop of the tincture of aconite in a glass of water, taken every hour, is also highly commended.

In infants, light colds require little treatment more than scrupulous cleanliness, warm clothing and bathing the feet with warm mustard water. To promote expectoration, give:

*R.* Syrupi ipecacuanha,  $\mathfrak{z}$  ij; spt. æther nitr.,  $\mathfrak{z}$  j; syr. simplic,  $\mathfrak{z}$  ij. *M.* Dose: a tablespoonful every three hours.

Inunction of the nostrils and chest with warm suet generally gives considerable relief to children where there is a "tight cold." A very much diluted croton oil applied to the chest is also very beneficial.

*Coughs.*—These differ so much from each other in causation that it is very difficult to give any home prescription.

In an adult the feet may be soaked in hot mustard water, a mustard plaster applied to the chest, or the chest rubbed with a mixture of sweet oil to which a little croton oil has been added. Or, *R.* Paregoric, grs. xv; Aquæ, a wineglassful. *Mix.* Take above every three hours. Or, *R.* Ammon. carb., grt. xv; syr. seneg.,  $\mathfrak{z}$  iss; syr. prun. virgin,  $\mathfrak{z}$  iss; syr. tolu,  $\mathfrak{z}$  ij; Aquæ, fl.  $\mathfrak{z}$  iss. *Mix.* Dose: a teaspoonful every two or three hours.

An excellent domestic remedy for a cough is, *R.* Hoarhound leaves,  $\mathfrak{z}$  j; water, pt. j.

Boil for fifteen minutes; strain out the leaves; add enough sugar to make a nice syrup; boil for fifteen minutes. The dose is a tablespoonful every hour.

## INFECTIOUS PNEUMONIA.

MASSALONGO has described an epidemic of pneumonia in Tregnigo, a town in Italy of 2,000 inhabitants, which presents certain points of interest. One hundred persons were attacked, of whom thirty died. No special atmospheric or telluric conditions preceded the outbreak, which was limited in extent, and spread from house to house, three, four, or five cases occurring in each one. The onset of the disease was rarely with a rigor, usually with malaise, headache, and indisposition for three or four days, rather resembling typhoid fever. The lung symptoms were usually marked, the expectoration rusty, but resolution was not often preceded by any critical phenomena, and took place very slowly, the patients remaining in a heavy, apathetic state. Delirium was frequent, and at times furious. Meningeal, articular, and renal complications were common, and hypertrophy of the spleen almost constant. During convalescence paralytic affections developed in three cases. After death it was observed that putrefaction supervened very rapidly. The characteristic micro-organisms were found in the sputum. Many interesting facts are given in proof of the contagious nature of the disease.

There can be no doubt that this was an epidemic of an infectious disease with pulmonic lesions, but the mode of onset, course, and character of the symptoms seem very different, in many respects, from those of ordinary croupous pneumonia. Similar differences have been observed in other epidemics and the identity of the affections has been questioned by several observers.—*Ed. Medical News.*

### ON THE DIFFERENTIATION, BY MEANS OF THE PITCH OF SOUND, OF PULMONARY SIGNS OBTAINED BY AUSCULTATION AND PERCUSSION.

By AUSTIN FLINT, Sr., M.D., of New York.

From the *Jour. of the Amer. Med. Ass'n.*—By most writers on physical exploration, pitch modifications, except in the sibilant and sonorous râles, perhaps ægophony, are not recognized, no allusion whatever being made to them.

My object in this supplementary paper (first paper published in 1852) is to give a statement of the differential characters derived from the pitch of sound, in the signs obtained by auscultation and percussion, as applied to the respiratory system, especially in so far as knowledge of these characters has originated in my own studies, and to inquire how far the results of my studies are, at the present time, accepted by clinical observers.

*On the differentiation, by means of the pitch of sound, of signs obtained by percussion.*—We may formularize the facts relating to the pitch of sound in the pulmonary signs obtained by percussion, by saying, that (excluding flatness which is absence of resonance and therefore has no pitch) all the abnormal signs are higher in pitch than the normal vesicular resonance. This normal vesicular resonance varies considerably in pitch in different healthy persons. The variations will be found to correspond with those of the vesicular quality. In proportion as the vesicular quality of the normal resonance is marked, the pitch of sound is low, and *vice versa*. This correspondence is observed in the variations observed in healthy persons as well as in cases of disease.

*On the differentiation, by means of the pitch of sound, of respiratory signs.*—There are considerable variations in the intensity, the quality and the pitch of respiratory sounds in healthy persons. Hence, there cannot be an ideal standard of the normal respiratory or vesicular murmur. The intensity varies within pretty wide limits; the quality is in a greater or less degree, vesicular, and the pitch is not uniform. This statement applies alike to the sound of inspiration and expiration. Moreover, the length of the expiratory sound is variable.

The normal respiratory murmur varies also in different parts of the chest. The characters of the respiratory sound in the infra-clavicular region differ considerably from those of the respiratory sound in the mammary, the axillary or the infra-scapular regions. Situated in either of these latter regions, the characters of the respiratory sound which are normal at the upper part of the chest would denote disease. And again the infra-clavicular region does not furnish characters of respiratory sound which are alike on the two sides. A practical acquaintance with these normal variations is an important requirement as preliminary to the study of morbid respiratory signs.

Taking up first an important respiratory morbid sign, namely, the bronchial or tubular respiration, it is a correct comparison to say that the sound is like that produced by blowing through a tube. But how much more precise is a description embracing its characters pertaining to quality and pitch! These characters are tubularity and raised pitch. The absence of any vesicular quality, and the high pitch are the essential characteristics. Intensity is of no importance. With these characters, the sign always represents solidification of the lung. I may add that the characters of the bronchial respiration, as determined by analytical study, prove this sign to be, not bronchial in its origin, but transmitted from the larynx and trachea. The proof consists in the fact, that the characters of the bronchial respiration are identical with those of the trachea and laryngeal respiratory sound.

Bronchial respiration represents complete or considerable solidification of lung. Now, in different diseases the lung is but slightly or moderately solidified. The bronchial respiration does not represent the latter physical conditions. These give rise to abnormal modifications of the respiratory sound not included in bronchial respiration. How are these modifications to be described and named? The names rude, rough or harsh respiration were heretofore used by English and American writers. These names express not merely an indefinite but a false analogy. As a result of clinical observations and analytical study, I proposed in 1856 the name broncho-vesicular respiration. The pertinency of this name consists in the fact that the characters consist of the normal vesicular and the bronchial in combination, and they are in variable proportions corresponding to the degree of solidification. Some English writers have adopted the name. But it has made as yet little progress in France or Germany.

But there is a cavernous respiration, and its characters, as derived from pitch and quality of sound, are sufficiently distinctive. The characters are a low pitch of the inspiratory sound, together with a quality which is neither vesicular nor tubular (a quality which I distinguish as simply blowing), and an expiratory sound still lower in pitch than the inspiratory. Elsewhere than in America, the present status of this sign is about the same as it was thirty-five years ago. Its non-existence is still the doctrine in Germany, and the description of it by English and French writers has not materially changed.

To the abnormal modifications of the expiratory sound which, remarkable as it seems, escaped the notice of Laennec and those who immediately followed him, attention was first directed by an American observer, James Jackson, the younger, in 1833. He pointed out the significance of a prolonged expiratory sound as a phthisical sign. The importance of observing the pitch of this sound was pointed out by me in 1856. A prolonged, high pitched, tubular expiratory sound is as invariably proof of solidification of lung, when it exists alone or when it follows a normal inspiratory sound, as when associated with a high pitched tubular inspiration in the so-called bronchial respiration. The mere prolongation of this sound, irrespective of pitch and quality, is not a sign of phthisis or any other affection which involves solidification. If not tubular and raised in pitch, a prolonged expiratory sound denotes either that the parenchyma of the lung is not solidified, or that the sound proceeds from a pulmonary cavity.

The significance of the pitch of moist bronchial or bubbling râles, inclusive of the so called sub-crepitant râle, is perhaps not generally appreciated. A high pitch denotes that these râles are produced in tubes which



are situated either within or proximate to solidified lung, and a low pitch excludes solidification at or near the site of their production. This is a practical point in auscultation to which most writers make no reference.

*On the differentiation, by means of the pitch of sound, of vocal signs.*—To those who have given no attention to the subject, it may seem that the differential characters of vocal signs offer little room for variations in the pitch of sound. The fact is otherwise; the variations in pitch are of much importance. An abnormal increase of the intensity of vocal resonance without any notable elevation of pitch, as compared with the normal resonance, denotes either a moderate degree of solidification of lung or a pulmonary cavity. A high-pitched vocal resonance near the ear is always evidence of complete or considerable solidification, whether the vocal sound be intense or weak.

The sign called by Laennec ægophony, and to which he devoted so much consideration in his treatise, has the pitch of bronchophony. It denotes considerable or complete solidification. In this respect it is neither more nor less than bronchophony. It differs from the latter in an apparent distance, as well as in its tremulous or bleating character. In pectoriloquy the speech may be conveyed either by solidified lung or through a cavity. Can it be determined whether or not pectoriloquy denotes a cavity or solidified lung in particular cases? I answer this question in the affirmative. The discrimination is made by attention to the pitch of sound. If the vocal resonance associated with the transmission of speech has the pitch raised and the voice near the ear, the medium of transmission is solidified lung; if, on the other hand, these characteristics be wanting, the transmission is through a cavity. This method of differentiation I have practised and taught for many years. Its reliability is yet to be accepted by others.

#### LARYNGEAL PHTHISIS.

Dr. E. FLETCHER INGALS, of Chicago (*N. Y. Med. Jour.*, Nov., 1885).—For the relief of pain I have had more satisfactory results from the use of a pigment consisting of morphine, gr. iv; carbolic acid, gr. xxx; tannic acid, gr. xxx; glycerin and water,  $\mathfrak{ss}$   $\mathfrak{z}$ iv, than from anything else I have ever tried. It will usually benumb the parts for from twelve to thirty-six hours.

In the intervals between the applications of this pigment, sedative powders may be employed with benefit. Sometimes great relief may be obtained by allowing the patient to use the pigment at home in the form of a spray, first diluting it with two or three parts of water, or even employing it in full strength when we find that it is used properly; thus applied, it relieves the pain and checks cough.

In mild cases, a sedative powder—consisting of morphine sulphate, gr. j-ij; benzoin, gr. xx; bismuth sub nitrate, gr. xx; iodoform, gr. xx—may be used by the patient, and even in severe cases it will sometimes be found very beneficial. Powders may be applied directly to the larynx by means of a bent tube, or, in cases where the throat is very sensitive, they may be thrown through the nares with an insufflator, providing they are blown in with considerable force at the moment of a deep inspiration. In about half the cases where this method is tried the application to the larynx will be thorough and satisfactory.

The writer expected good results from the new anæsthetic, cocaine hydrochlorate, but they had been unsatisfactory.

#### THE TREATMENT OF ROSE-COLD AND HAY-FEVER BY COCAINE.

By J. M. DA COSTA, M.D., Prof of Medicine in the Jeff. Med. Coll.

From the *Medical News*, October, 1885.—There is, undoubtedly, an insusceptibility—in some a varying susceptibility—to cocaine locally used. The manner of employing the cocaine is not without importance. It may be used

with a small atomizer as a spray. But the readiest means is to inject from five to eight drops of a four per cent. solution up each nostril, the head being thrown backward; in some persons once, in most, twice daily, will be found sufficient. It will be necessary to instruct patients not to irritate the membrane by rubbing it needlessly with the glass tube, or pushing this up too far.

Its mode of action in hay fever is partly by the local insensibility it produces, partly by the contractions of the capillaries it induces. The effects are thus chiefly local. It will not arrest the bronchial catarrh or the asthma, which attend some cases; yet it is astonishing how it seems to lessen the tendency to these complications when early applied, and before they have got much headway. Is its action, then, not partly a reflex action? That the remedy is radical, and, strictly speaking, curative, I have not found; but that it gives great comfort, converts bad into light cases, enables those to stay at their homes who otherwise are obliged to flee to hay-fever resorts, relieves much suffering and distress, I know and have fairly tested. In no case of rose-cold or hay fever ought cocaine to be left untried. •

## DISEASES OF THE ORGANS OF CIRCULATION.

### ENDOCARDITIS.

Dr. WILLIAM PEFFER, of Philadelphia (*Medical Times*), says:—If endocarditis appears in the course of rheumatism, I abandon whatever treatment I may be employing and again apply a blister to the præcordia if that is not still sore. Internally I administer calomel, opium, and digitalis. When I have given as much calomel as I think proper, I substitute iodide of potassium and digitalis. The relief of the cardiac inflammation and the preservation of the integrity of the heart are of vastly greater consequence than the mere control of the joint-trouble; in fact, the patient has to remain quiet so long, until the heart has entirely recovered, that it makes little difference whether or not the joint remains inflamed a few weeks longer.

### DISEASES OF THE HEART, WITH SPECIAL REFERENCE TO PHYSICAL DIAGNOSIS.

By STEPHEN S. BURT, M.D., Prof. of Physical Diagnosis in the N. Y. Post-Graduate Med. School.

From the *N. Y. Med. Jour.*:—This case illustrates one of the secondary symptoms of heart disease—namely, flatulent dyspepsia. Long before serious engorgement becomes apparent there is this slight alteration in the circulation which results in defective digestion. And, too, a little unusual exertion or some slight exposure of the neck and shoulders produces a dry cough. Besides, if you closely watch these patients you will see that there is dyspnea, not upon ordinary exertion, so long as it is confined to a plain surface, but during an ascent of a very slight elevation, or on any unusual exercise. As a result also of this, the bright-red color of the lips is seen to change to a much darker hue. I have had just such an instance under observation for the past four years. The patient was treated for simple dyspepsia, with very indifferent results, her heart lesion being unrecognized. But when the real cause of her trouble became known she made rapid improvement. A pill containing a grain each of digitalis, iron, and quinine, in addition to the stomach mixture, with, now and then, medicine for the intestines, comprised most of the treatment. The slight cough, which is provoked by a similar condition in the pulmonary circulation, is prevented by taking only moderate exercise and by keeping the superficial circulation active with sufficient clothing.

## MITRAL STENOSIS.

By J. E. GRAHAM, M.D., Canada.

From the *Canadian Practitioner*, November, 1885.—The contracted mitral cannot be said to be a common form of heart disease. At the same time, there is no doubt but that on account of the difficulty of diagnosis many cases are overlooked, and a most serious form of heart trouble misunderstood. As will be seen hereafter, in many cases an accurate diagnosis is impossible on account of the absence of heart murmur. In many others, however, in which the præ systolic murmur is presented, either through carelessness or want of knowledge, it is not recognized.

In the year 1861, Dr. Gardner published an account of the præ systolic, or, as he called it, the auriculo-systolic murmur. This directed Dr. Fagge's attention to the physical signs of mitral stenosis, and after ten years' study and observation he published his paper fourteen years ago in the Guy's Hospital reports.

In the meantime, articles were written by Drs. Gull Hayden, Peacock, Sutton, and Hyde Salter. Dr. Salter dealt principally with the præ systolic murmur, its character, and its relation to the normal heart sounds. He was of opinion that the præ systolic was one of the easiest murmurs to detect, and went so far as to say that anyone who failed to identify the sound would not only be unfit to hold the place of an accomplished and critical physician, but could hardly be considered a decently informed member of our profession. This is no doubt true in some cases of easy detection. It must be remembered, however, that patients come under observation in whom the irregular action of the heart renders the diagnosis of the sound a very difficult matter.

Dr. Fagge in recording his cases put them under three heads :—

1. Cases in which a direct mitral or præ systolic murmur was heard during life, and in which the mitral orifice was found after death to be contracted.
2. Cases in which the mitral valve, or orifice, was found after death to be narrowed, but in which no præ systolic murmur had been heard during life.
3. Cases in which a præ systolic murmur was recognized by auscultation, but in which no opportunity was afforded of verifying the diagnosis by post-mortem examination.

He gave six cases under the first head, forty under the second, and nineteen under the third.

Toward the end of his paper he states that he had collected from various sources twenty-eight cases in which the præ systolic murmur had been heard during life and the post-mortem revealed mitral stenosis. No case had then been recorded in which the præ systolic murmur was heard and contraction of the mitral was not found. It will thus be seen that we can have mitral stenosis without the presence of a præ systolic murmur. On the other hand, however, when that murmur is heard we may almost positively conclude that mitral contraction is present. We should not be misled by the large number (40) of cases which Dr. Fagge gives under the second head. In fifteen of these death was sudden, and no proper examination had been made. In some of the remaining twenty-five the murmur may have been overlooked. It must not be considered, then, that the præ systolic bruit is of less importance as a physical sign because mitral stenosis has been so frequently found in post mortem examination, where its existence had not been suspected.

## ENDOCARDITIS LIMITED TO THE RIGHT HEART.

By RADCLIFFE CHESTON, M.D., Resident Phys., Episcopal Hosp., Philadelphia.

From the *Medical News*.—By permission of Dr. F. P. Henry, the physician in charge, I report the following case of simple endocarditis limited to the right heart, occurring in the wards of the Episcopal Hospital, as interesting, owing to the rarity of its primary occurrence during adult life:

Eliza H., æt. 60, single, born in England, was admitted to the ward on March 27, 1885, with left-sided hemiplegia, from which she had been suffering for five weeks. The attack came on suddenly during the night. She

was awakened by the pain and intense itching in left arm and leg, and on attempting to move she fell out of bed, and was picked up completely paralyzed on left side. The muscles of the face were paralyzed on the right side, and she had no control over bladder or rectum. Her family history was good; she had never had rheumatism or syphilis. As far as I could ascertain, she had always been a healthy woman up to the time of her present trouble, excepting slight paroxysms of præcordial pain, for a month before the present attack.

*Autopsy.*—Brain very soft; vessels full; those at base of brain very hard and patulous, showing atheroma of their walls. The dura matter was inflamed and adherent to the brain, with patches of lymph along the longitudinal fissure; the other coverings of the brain were also inflamed. In the cortical substance of the third ascending frontal convolution, close to the longitudinal fissure, was found a clot the size of an English walnut, undergoing softening. There was very little effusion into the ventricles. The heart was found to be about the normal size, covered with fat, and its walls of natural thickness. The aorta was dilated and decidedly atheromatous. The coronary arteries were enlarged, showing also atheromatous change. The left heart showed no pathological change, both the aortic and mitral valves were perfectly competent by the hydrostatic test, and of normal texture, as were also the pulmonary valves; but the tricuspid valve was found to be incompetent; the two posterior cusps were bound down to the walls of the heart by a fibrinous exudation, with a small fibrinous clot between one of the cusps and the heart-wall. Along the margins, on the auricular surface of the cusps, were minute rose-colored vegetations, while the cusps themselves were considerably thickened back to their base. In the right auricle, on the right posterior wall, was found a fibrinous clot, one inch and a half long, one inch wide, and a third of an inch thick, firmly bound to the wall of the auricle so tightly that when it was detached almost the whole muscular and serous layers came with it.

I would like to draw attention to the special points of interest:—(1) The limitation of the endocarditis to the right heart after foetal life, an extremely rare occurrence. (2) To the binding down of the cusps of the valve to the heart wall, which is mentioned in Dr. Byron Bramwell's work on Diseases of the Heart, as very exceptional in simple endocarditis. (3) To the fibrinous clot, bound so firmly to the wall of the right auricle.

### VALVULAR ANEURYSM.

By ALBERT BRINKMAN, M.D., Brooklyn, N. Y.

The specimen I present is one of disease of the aortic and mitral valves, accompanied by valvular aneurysm of one of the leaflets of the mitral valve. The subject from whom it was taken was a man of tall and muscular physique, who entered my service at Charity Hospital giving the following history:

John M., aged thirty-eight years, a native of Ireland, and a blacksmith by occupation, enters complaining of œdema of both legs. Admits the abuse of alcohol, but denies all history of rheumatism. No evidences of syphilis obtainable.

*Diagnosis.*—Aortic obstruction and regurgitation; mitral obstruction and regurgitation.

The autopsy showed a greatly hypertrophied heart, the weight of which, after its cavities were freed from blood, was twenty-four ounces. This is a maximum weight for a heart with combined aortic and mitral disease, a heart with both of these lesions generally being intermediate in weight between that which obtains in the two separate forms of the disease, the organ being lighter than in aortic and heavier than in mitral disease. Sibson gives cases of this kind in the male as averaging from  $14\frac{3}{4}$  83 to  $21\frac{3}{4}$  83. The extremes of mitral disease are  $14\frac{3}{4}$  to  $18\frac{3}{4}$ ; the extremes of aortic disease are  $14\frac{3}{4}$  to  $46\frac{1}{4}$ , the latter being that of a case of aortic obstruction mentioned by Bristow.

Upon opening the heart, contraction and thickening of the aortic valves were found, with calcareous incrustations and vegetations. The mitral valve besides being insufficient, shows a valvular aneurysm of its posterior leaflet. Sibson, in "Reynold's System of Medicine," gives the mode of development of these pouches or aneurysms.

We know that the mitral valve is peculiarly liable to these aneurysms—more so than the aortic valves. It is comparatively seldom that we meet with them on the aortic valves. This predisposition is readily accounted for if we glance for a moment at the action of the mitral valve.

This valve is subject to valvular aneurysm because of the great amount of pressure brought to bear against it in the ventricular systole, and also because endocarditis does not attack the very edges of the mitral valve, but the margin just within its edges; and after an endocarditis has occurred, with its production of new tissue, and this new tissue undergoes fatty, granular, or calcareous changes, ulceration sets in on the body of the valve; this ulceration either goes on to perforation, causing rupture of the valve and consequent regurgitation, or the structure of the valve becomes so attenuated that a portion of it yields to the blood-pressure and forms a pouch or valvular aneurysm.—*Proceedings of the Brooklyn Path. Soc.*

### RUPTURE OF THE AORTA.

To the Pathological Society of London, Dr. CHARLEWOOD TURNER showed this specimen, taken from the body of a man, aged 64, who came to the hospital suffering from syncope, and died next day from that cause. He had suffered from palpitation and shortness of breath on exertion. At the *post-mortem* examination there was extensive rupture of first part of arch of aorta, a longitudinal rent older and a more recent transverse rent above this. The latter rent reached to the innominate artery. A dissecting aneurysm had been formed in connection with the older rent, the walls of which showed extravasated blood. Blood had also been poured into the pericardium, and at the roots of the lungs. The heart was somewhat hypertrophied, but there was little valvular disease. The kidneys were granular, and the cerebral vessels were atheromatous. The symptoms had clearly been due to the dissecting aneurysm, which was the cause of the final rupture. Dr. Peacock had described T-shaped ruptures in similar cases. The rupture had occurred at the spot where the aorta lost the support of the pericardial sheath.

Dr. Norman Moore called attention to the hypertrophy of the heart. He asked whether the joints had been examined. In cases of aneurysm of the aorta with chronic interstitial nephritis he had almost invariably found gout, and he mentioned a typical instance he had lately seen. In reply to a question by the president, he added that he had often found interstitial nephritis by itself, without gout.

Dr. Turner could not give any information as to the joints, but he had attached much importance in his paper to the high arterial tension.—*Compendium Med. Science.*

### DISEASES OF THE ORGANS OF DIGESTION.

#### EFFECTS OF ZYMOTIC DISEASES UPON THE TEETH.

By Dr. F. S. WHITSLAR, Youngstown, Ohio.

From the Proceedings of the *Northern Ohio Dental Society*:—Causes of decay are two-fold, and may be classed as predisposing and exciting. With regard to exciting causes, there has been much discussion. Grouping the various opinions entertained by those who have experimented and written extensively upon the subject, we have: (1) Those who regard it as a real disease, a vital phenomenon strictly comparable to morbid conditions of

other more highly organised parts of the body. (2) Those who regard it in the main as the effect of mere chemical action, but who also consider that some very constant appearances are only explicable on the hypothesis of vital action. (3) Those who consider it entirely the effect of chemical action, in no degree modified by connection with a living organism. Fox, Bell, Hunter, Cuvier, Hertz and Neuman maintained that dental caries was an inflammatory affection, a true disease of the dentine, and the name of "Odonitis" was given to this supposed disease. This theory has so much evidence against it, and so little in its favor, that it need not detain us longer.

The first probable effect of zymotic diseases upon the teeth is the partial arrest of their development. The crowns of teeth bearing the marks of interrupted development, instead of presenting the smooth and glassy surface characteristic of finely developed enamel, are disfigured by the presence of an irregularly grooved and pitted surface, usually accompanied by a considerable diminution in size. The incisors are commonly very thin and compressed, while the cuspids and cusps of the molars are terminated by sharp points. The enamel and dentine tissues are not only deficient in quantity, but are defective in quality.

While we cannot in every case trace this ridged, pitted, or honeycombed condition of the teeth to the presence of serious illness of the patient during the time when the defective portions of the teeth were being developed, it can scarcely be doubted that an imperfect organization of the teeth, if not the result of some special disease, such as measles, influencing the system generally, is yet consequent upon constitutional conditions. The simple fact that if one tooth is affected those parts of other teeth which correspond in respect to the period of formation will present a similar condition, precludes the supposition that the effect is due merely to a local cause. Hereditary syphilis in its effects may often be traced as the cause of a peculiarly dwarfed condition of certain teeth. The incisors and cuspids are of small size, and peg-shaped; the crowns are notched, the notch being in the main a concavity from the one corner to the other, though there may be secondary notches in this general concavity. Teeth of the class which we note as syphilitic have a dusky, opaque appearance, and a relatively small. They are of a very soft character, and consequently wear down very rapidly. Moreover it is claimed by the best authorities that constitutional syphilis is capable of modifying the nutrition of many parts of the body, manifesting its influence in attacks on the hair, the nails, and the skin generally. Now the homological relation which exists between the teeth and various dermal appendages may serve, if not to explain, to at least render less surprising, the fact that the developing teeth should be a chosen site for its manifestation.

So much for the arrest of development. Now what are the effects of zymotic diseases upon teeth which bear none of the marks of partial development? We answer, that all febrile conditions or diseases predispose teeth to decay, first, by diminishing vitality, second, by changing the secretions of the mouth so that they act injuriously upon the teeth. In dyspepsia we have not only the predisposing but also the exciting causes of decay, as it not only impairs vitality, but prepares in the stomach an acid that is continually being thrown upon the teeth, which acts upon them with great energy. I need scarcely say that residence for any great length of time in miasmatic regions, inducing unfavorable conditions, institutes a predisposing cause. and in brief, all epidemic, endemic, dietic, and enthetic diseases derange the functions of the body, vitiate the secretions, impair the vitality, and may be classed as predisposing causes of decay.

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#### "INDIGESTION," AND ITS TREATMENT.

A writer in the *London Medical Times*, says:—There is no complaint of which the diagnosis and the treatment are more often vitiated by gratuitous theorizing, and consequently meddlesome drugging, than chronic indigestion. Moreover, this same love of theory and "treatment"—a curious source of ready satisfaction to many medical minds—leads to a great exaggeration of

the number of cases which are dubbed dyspeptic. Satisfied with the supposition of some derangement of the secretions or movements of the stomach which cannot be proved or observed, but is all the more elaborately and dogmatically enunciated, too many of us are apt to search no further than this organ for the ultimate cause of the complaint which we have to treat. And yet it may be boldly stated that an immense majority of the patients who come to doctors for relief from pain, or discomfort of some kind, be it "fullness," or flatulence, or flushing, after taking their meals, have little or nothing the matter primarily with their stomachs, and do not require, but should rather avoid, any medicine directed thereto, or indeed any drug at all. This proposition will be found to be true just in proportion to the apparent freedom of these patients from any ailment except that of the stomach. In considering this question, cases of organic disease, as cancer, or ulcer, or gastric catarrh from obvious irritatives, such as alcohol, or patently immoderate living, are left out of sight; for they are evidenced by other symptoms beyond those to which we refer, and, generally revealing themselves to the careful medical enquirer, are not ticketed as dyspepsia. Equally of course are ignored the common derangements of the stomach which would more properly be termed acute, occurring in the course of fevers and inflammations, or as the immediate results of acts of gluttony or drunkenness. The ordinary dyspeptic patient is one who suffers at certain times after taking food; and even if never quite free from his complaint, which is not often the case, is at all events much worse at such times than at others. Many, indeed, both claim and appear to be quite well except at the fatal after-dinner time.

To come to a correct conclusion as to the diagnosis and treatment of these cases, a comprehensive knowledge is brought into requisition, and the more such knowledge is practically applied, the smaller will be the number of patients who will be vaguely called dyspeptics. We shall then eliminate the gouty, and the sufferers from the less obvious forms of renal disease, and what is often lost sight of, the victims of unsuspected cardiac mischief. It is not altogether rare to find patients persistently treated, and treated in vain, for "dyspepsia" by so-called stomachic remedies, be they acids or alkalies, or bismuth, or the many artificial and almost useless so-called physiological "digestives" the names of which end in *-pepsin*, whose symptoms, though incidently referable to gastric congestion, are really due to disease of the heart, and especially of the mitral valve. Again, the sufferers from chronic pulmonary affections, and notably from bronchitis, furnish a considerable contingent of cases which for the patients' sakes should not be put down as "indigestion." The host of neurotics, whose prominent complaint is dyspepsia, will certainly be more successfully treated by general hygienic or "tonic" methods than by "stomachic" medicines, or indeed, very often, than by giving much attention to even dietetic rules; and a change of habits or social surroundings will frequently succeed where all the resources of the cook and the druggist have been taxed in vain by the "therapeutical" physician. Psychical dyspeptics are misunderstood and maltreated by thousands.

It would seem perhaps scarcely necessary to insist upon the all-important part played in the production of some of the most troublesome cases of indigestion by the deficiency or absence of teeth. But this cause is surprisingly often overlooked by the most ardent treaters of disease, and cases might be quoted in numbers where many doctors, including those the most eminent, "for the stomach," have vainly drugged for years a healthy organ, whose owner has been at last relieved of his intolerable sufferings by the art of the dental mechanician.

Most prominent of all perhaps among the dyspeptics who apply for relief are those whose sufferings, sometimes of great severity, are due only to neglect of proper intervals between their feeding-times. Not quality or quantity of food is here at fault at all. These are they who take good breakfasts, because their digestive organs have had their physiological and therefore unstarved rest; who do not suffer much or at all after luncheon (if they take any); but from an over-late dinner, when their possibly idiosyncratic stomachs have been long empty, undergo tortures which only an unnatural appetite can drive them to endure. Drugs are not good for such as these.

From this small and imperfect selection of common-place sketches from life it will be seen that "dyspepsia" ought not to be so great a bugbear to the doctor as it often appears to be. The despair of the therapist should decrease with his dwindling drug-list. Useful as in very many cases of organic disease of the stomach various medicines are, and indeed indispensable as perhaps the only means of relieving the patient, they are in such cases only palliative; and the same, in a modified sense, may be said of most of the remedies in the forms of acids and alkalies which are given at certain times and with certain rules, with the often plausible notion of affecting the secretions of the stomach. A dose of such medicine may relieve the pain or discomfort which follows a meal, or may even, though more doubtfully, prevent such pain in rare cases by promoting digestion; but the effect is only temporary; the cause is not touched, and the theory which prompts their administration is elaborated more in the study than at the bed-side. The stomach rarely suffers alone; never, perhaps, in indigestion which is curable. In curable dyspepsia drugs reach their lowest, in incurable disease of the stomach their highest, point of utility. Pepsin may relieve discomfort for the moment; but it seldom does, and at best it is a sorry therapeutic crutch. Opium, and even bismuth, are often a god-send to a cancerous stomach. And with respect to the purely dietetic treatment of dyspepsia, there are two sides to the question. Doubtless the dyspeptic should not disobey accepted dicta of physiology and of general experience with regard to his manner of living; and broad rules should in most cases be enforced. But in proportion as a man is dyspeptic, so he often finds out best for himself what to take and what to avoid; and as long as his meals are moderate in quantity and regular in time, he will often be better with an unrestricted diet-table. The most "dietetic" of doctors rarely practice themselves what they preach to the healthy, and the least dyspeptic of dyspeptics are verily not those who are always taking thought for their daily meat and drink.—*Med. and Surg. Reporter.*

### TÆNIA.

By WM. E. DOUGHERTY, M.D., of Hartsville, Pa.

From the *Med. and Surg. Reporter*.—The theory of spontaneous evolution, or that certain conditions and substances have a tendency to breed worms, needs not in these days of advancement even a passing notice. The popular belief and parental caution, that sugar-eating children are worm-breeding children, is as fallacious as it is popular. No eggs or embryos, no worms, although the breaths with sweetmeats tainted are. The older writers wrote of a morbus verminosus and a worm disease without the presence of worms. Credulity is rampant. People whose note I would take for any amount, and know that they would pay it at maturity, say that under certain geographical and climatic conditions a bushel of sawdust will, in twelve hours, be a bushel of fleas. This is not more incredible than that all saccharine substances will evolve intestinal parasites. *Omne vivum ex ova*. There are many conditions which may be either favorable or hostile to the propagation of the parasites, as disease, personal conditions, occupation, cleanliness, climate, or the season of the year. Diseases which augment the peristaltic motion, are hostile to the incubation or alternation of the eggs, or embryos, which do not get the quiet necessary for their development. The three kinds of tænia most common in man, are the tænia solium, tænia saginata, and the bothrioccephalus lata. The tænia elliptica is delicate, and varying in length from four to sixteen inches, and frequents the dog and the cat. Tænia flavopunctata is also quite small, being from eight to twelve inches long. The head of this species has never been found. The segments in both these kinds are much broader than they are long, or from two and a half to five times as broad as they are long. This worm is exceedingly rare, having been found but once by Welland. *T. nana* is exceedingly minute, being about  $\frac{1}{16}$  of an inch long, the segments being 150 in number, and .018 of an inch broad. Tænia Madagascarinus has not been obtained entire, the seg-



ments being about five times as long or broad as the *T. nana*. The bothriocephalus lata is the largest of all the tape worms. Its head is about .08 of an inch long, and half as broad. The means by which the eggs or embryos are introduced is somewhat of a mystery, but as the embryos are provided with cilia, and are enabled to live and move about in the water for an indefinite time, it is not improbable that aquatic animals are the favorite nidus of these parasites. Its geographical distribution seems to be confined to limited areas, those areas being along the seas of Northern Europe, where the people subsist largely upon the fish taken in those waters. It is often found in the canine species, as well as in man. The bothriocephalus cordatus is so little known that we will merely enumerate it.

There is no possibility for the development of tænia, except as the embryos are introduced into the stomach by the eating of flesh or articles of diet which have been in contact with infected meat, or the imbibing of fluids in which embryos might be present. I know of no instance where animals other than the carnivora are subject to tænia, except such as are not over-nice or dainty—garbage-rooters, and bone-chewers. The hog or the cow are neither delicate nor æsthetic about the means of gratifying their thirst or appetite. My tænia patients have all been addicted to eating either raw ham or beef, or both. Persons who are in the habit of eating uncooked ham, are those afflicted with the *T. solium*, and those who eat rare beef, or that which has not been sufficiently heated to kill the vitality of the embryos, are as sure to be infested with the *T. seg.* Countries where the custom prevails of devouring the flesh reeking warm, and streaming with the blood, are the classic land of the tænia, and there all are tenanted alike with the tænia. The more that embryos abound in animals the more likely are they to be generated in man. Women are rather oftener subject to tænia than men, for the reason that they are more apt to eat raw meat during their culinary labors. The tænia are generally solitary, but are not antagonistic, for as many as forty have been found in the same person. And more than one species has been found to inhabit the same intestine at the same time.

One little peculiarity or, perhaps, idiosyncrasy for which I found no fitting place in the body of this essay, is the dislike that a tape worm patient manifests for music. Dr. Eberle, who was cautious in his assertions and philosophical in his deductions, said: "It is stated by authors that persons afflicted with tænia become uneasy and ill whenever they hear music, particularly the music of an organ at church. This looks more like a conscience ill at ease than the morbus verminosus."

A patient of mine who was very fond of merriment and music, informed me that music had no attractions for him, and that if any one was playing or singing he would go away to where he could not hear it. I introduced this as a specimen of a rare character.

#### DIARRHŒAS.

Dr. H. C. Wood in *Therapeutic Gazette*.—The following prescription we have tested almost innumerable times. It makes a very agreeable and efficient mixture, and may be given if necessary every two hours. Of course it should be varied, especially in the opium it contains, to suit individual cases.

R. Acid, sulphur, aromat., f ʒ iij; extr. hæmatoxyl., ʒ iij; tr. cinnamon; tr. opii camph., ʒā f ʒ iss; syr. q. s. ad f ʒ vi. M. S.—Tablespoonful, as required, in a little water.

A remedy, still less frequently used than sulphuric acid, but of great service in non-inflammatory diarrhœas, is carbolic acid, or, perhaps preferably, creosote. This remedy is especially useful in cases of lientery, with which there is such excessive nervous irritability of the bowels that food when taken passes right through. But it is also often very serviceable in ordinary summer diarrhœas. A very valuable combination, useful especially in sudden violent attacks, is afforded by the following prescription. It may b

administered every half hour at first; of course care must be exercised not to give the maximum dose too frequently.

R Chloroform, f ʒ ss; ol. caryophylli, creasoti, aa f ʒ i; tr. opii, f ʒ ss. M. S.—Shake well. Dose, 20 to 80 drops.

In some cases, especially of more chronic or persistent diarrhœas, of which we have been speaking, where there is excessive acidity of the intestines, a combination of creasote with chalk or bicarbonate of sodium is very useful. Not rarely the addition of the creasote to an ordinary astringent cough-mixture affords excellent results. In regard to dysenterics, there are only two remedies which have in our hands given satisfactory results. One of these is calomel and the other ipecacuanha.—*Gaillard's Med. Jour.*

#### OBSTINATE HICCUGH RELIEVED BY NITRO-GLYCERINE.

[Dr. O. T. SCHULTZ (*Amer. Practitioner*) reports a case in which, after resorting to a large number of remedies without benefit, gave the patient one drop of a one-per cent. solution of nitro-glycerine every two hours, for two days (the 10th and 11th days), when the spasmodic movements had ceased entirely. On the 12th day an occasional dose of the nitro-glycerine was given.

#### TREATMENT OF CHOLERA.

Dr. FRANK H. MASON, Marseilles, France, (*Medical News*, Nov. 7, 1885).—If the experience of the past summer can add any therapeutic suggestion to what has been said in previous reports of this series, it would be to recommend the remedy which was used in the cases of the American captains and their crews. It is the prescription of the lamented Dr. Valentine Mott, of New York, one of the foremost physicians of our country. It embodies the results of his experience in three successive epidemics of cholera, and was used by his own son during the pestilence of 1884 at Toulon and Signes, with extraordinary results. Its formula is:

R Tincture of rhubarb, 10 parts; extract capsicum, 2 parts; laudanum, Sydenham, 4 parts; camphor, ½ parts; syrup of ether, 50 parts; syrup bitter orange peel, 50 parts. Sig. One teaspoonful in a little water, and repeat until symptoms cease.

#### PRIMARY CARCINOMA OF THE LIVER.

Dr. L. WALDSTEIN (*N. Y. Path. Soc.*) reported two cases of primary carcinoma of the liver, the specimens possessing unusual interest because of the rarity of these cases.

#### ABSINTHE.

The *Med. Summary* says that the alarming increase of this drink in America is to be regretted. Theatrical people, it appears, take too readily to the drink. The consumer, after the habit has become established, loses the ruddy hue of health, becomes careworn and emaciated, and lays the foundation for paralysis of the cerebral structure, and the nerves arising or leaving place therein. The dipsomania resulting from the habit is of a violent nature and terminates in many instances in idiocy and dementia. There is but little chance of a cure being established.

Absinthe is made from wormwood, angelica root, sweet flag root, and alcohol; but an inferior kind is manufactured from essential oils and is colored with indigo. Unless the profession take active measures to combat the already existing habit of absinthe drinkers a nation of demented idiots will soon arise in our country.

## DISEASES OF THE URINARY ORGANS.

## URÆMIA.

From *Medical Record*, Nov. 28, 1885.—Dr. FRANCIS DELAFIELD (Section in Practice N. Y. Acad. Med.) in discussing the paper of the evening said:—Another point to which Dr. Page had called attention was that particular group of symptoms belonging to kidney diseases, and commonly called *uræmia*. All were familiar with this group, consisting of cerebral symptoms—headache, restlessness, sleeplessness, delirium, stupor, convulsions, and coma—repeated and uncontrollable vomiting, and dyspnœa, apt to be excessive. These three—cerebral symptoms, vomiting, and dyspnœa—sometimes the one, sometimes the other, being most marked, belong regularly to a uræmic attack.

Of course, it would be out of place at the present time to attempt any prolonged discussion as to what the real cause of uræmia may be. Most observers, however, had come to a choice of one of these conditions: either that the attacks are due to anæmia and œdema of the brain and its membranes, or that they are due to the circulation of urea or some other excrementitious substance in the blood, or that they are due simply to disturbances of the circulation.

The idea that uræmic attacks are due to poisoning of the blood by urea or other excrementitious substance is one which has taken a very firm hold upon the profession, and one which is felt in every-day practice. When a patient has been found in the uræmic condition, purging, sweating, and the use of diuretics have been, and still is, a routine treatment. Most of us have applied this routine treatment, and may yet use it, although we may not think very highly of it. All must have felt that, although it is the routine treatment, it is one which but seldom has any favorable effect on the patient.

Within a moderate number of years the drift of practice has been rather to use remedies which really act upon the circulation of the blood, and the good effect of which seems rather to indicate that these uræmic attacks are not due to any blood-poisoning, but are simply due to an abnormal distribution of the blood throughout the body, which seems to consist in that the brain, the lungs, the stomach, the kidneys, perhaps the liver, contain too small quantity of arterial and too large quantity of venous blood.

The plans of treatment which have been brought forward in later years, whether adopted by those who hold that the symptoms are due to disturbance of the circulation or not, do seem to point in that direction—for example, the use of opium. All of us have learned to look upon opium in the treatment of both acute uræmia and the more prolonged uræmic conditions as our great reliance. We have also learned that the more severe the uræmic attack, so much the larger doses of opium can be used, and that to do the most good we should administer it in the most sudden way, and that is by large hypodermic injections.

In other words, we use a drug that strengthens the force of the heart's action and relaxes any contraction of small arteries and capillaries which may exist. In the same way we use chloral hydrate.

In uræmic attacks in which the heart acts feebly, it is best to resort to those remedies which stimulates the heart's action.

In the uræmic attacks in which the heart's action, during the attack, is found too forcible, the best results are obtained with drugs which reduce its force.

The uræmic attacks which resemble angina pectoris, being attended by spasmodic contraction of the small arteries, are best relieved by inhalations of nitrite of amyl and the administration of nitro-glycerine.

It seems, therefore, that in the treatment of the acute and of the more chronic uræmic attacks we are learning more and more to place confidence in the drugs which do not eliminate a poison from the body, but which simply act upon the heart and upon the arteries.

Dr. WILLIAM H. DRAPER said his own experience had brought him to the same conclusion which had been expressed so well by Dr. Delafield. He con-

feased, however, that he was perhaps more or less under the dominion, in cases of the more acute cerebro-spinal symptoms ascribed to uræmia, of the eliminative treatment.

At the same time he was prepared to admit that his views with regard to the manner in which so-called eliminative remedies act was not, perhaps, by the elimination of any poison from the body so much as by their action upon the circulation. He thought that we might arrive by blood-letting, by brisk purgation, and by active diaphoresis, at the same results, so far as the circulation was concerned, which were obtained by the administration of opium, glonoin, and nitrite of amyl.

When, however, he was brought into contact with a case of uræmic convulsions, he was prone to adopt either blood-letting or brisk purgation in connection with opium. He thought that was the point which Dr. Page wished to make when recommending the pilocarpin with opium. Dr. Draper had not for some years used pilocarpin in cases of uræmia, partly because he had not had very marked success with the remedy, and partly because he had felt that it was a dangerous cardiac depressant. He had been more given to the use of brisk purgation and blood-letting; his experience with blood-letting had been chiefly in cases of puerperal convulsions.

In the treatment of the less alarming uræmic symptoms—the uræmic headache, dyspnœa, and vomiting—he had felt for a long time that opium was the sheet-anchor. He had not, thus far, had the success with nitro-glycerine that he had obtained with opium. He knew nothing which relieved uræmic dyspnœa so well as a hypodermic injection of morphine, and it was equally efficacious in the relief of uræmic headache.

#### MALARIAL HÆMATURIA.

By S. LEARD KROWN, M.D., Kemp, Texas.

From *Daniel's Texas Med. Jour.*, Oct., 1885.—The effects of the poison, malaria, upon the vaso-motor centers is paralysis, causing relaxation of the blood vessels and allowing exudation of blood through their walls. The mischief done is more conspicuously seen upon the mucous surfaces, because these are vascular parts with the vessels sparingly supported by substantial tissues. No matter whether the kidneys, stomach, bowels or skin be most involved, the indications for treatment are the same, which are to increase arterial tension, overcome relaxation of the vessels, and check the waste of blood, which is not only being rapidly lost, but its presence everywhere outside of the vessels, seriously interferes with the performance of the functions of organs, and almost totally suspends nutrition and elimination.

Prof. Henry Orendorf, professor of therapeutics in the Kentucky School of Medicine, taught in his lectures and clinics the use of strychnia in this disorder. The same author states, in the *Louisville Medical News* of August 26, 1882: "This drug (strychnia), standing at the head of vaso-motor stimulants, is especially useful in low vascular tension. It should be administered in full doses, that the relaxed vessels may be made so tense as to prevent exudation. By full doses is meant the amount required to produce the desired effect, *i. e.* to stop leakage. Therefore, if one-thirtieth of a grain does not suffice, push it to one-twentieth, to one-fifteenth, and even to one-tenth of a grain, repeating sufficiently often to secure and keep secured the physiological action of the drug."

Trusting to the cinchona alkaloids in this malarial disorder, is a measure which greatly hazards the well-doing of the patient, notwithstanding the high authority to the contrary. The following quotations made by Bartholow substantiate this assertion: "Quinine in large doses depresses the heart, arrests it in the diastole without impairing its contractibility, and lowers the arterial tension." (Chisom, Briquet.) "Quinine acts on the cardiac motor ganglia, and hence occurs the feebleness of the heart's movements, and in part the general lowering of the vascular tension." (Lewitzky.) "Besides these effects, it unquestionably depresses the vaso-motor system, after a short period of preliminary stimulation, probably." (Jerusalimsky,

Lewizky, Briquet.) It is clear, then, that the administration of the cinchona alkaloids would increase the vascular expansion already existing. In addition to strychnia being a vaso-motor stimulant, and thereby narrowing the calibre of the blood vessels, it ranks in the third place among the anti-malarial remedies, the first and second places being occupied by quinine and arsenic respectively.

### PHYSIOLOGICAL ALBUMINURIA.

From *Med. News* (Editorial).—Whether or not, in strict accuracy, there be such a thing as physiological albuminuria, there can be no doubt that it occasionally occurs that albumin is present in the urine of those who exhibit no other symptom whatever of renal disease. There are three separate varieties of this condition: The albuminuria of the newborn, which approximates more nearly than any other form to a true physiological albuminuria; the albuminuria of adolescence, and the albuminuria of otherwise healthy mature men.

First, as to the albuminuria of the newborn. Virchow, Dorn, Martin and Ruge, and Hofmeier, have all called attention to this condition. Hofmeier says it is almost invariably present in the newborn. According to Ribbert, albuminous urine is secreted by the fœtus, and disappears a few days after birth.

The albuminuria of adolescence less justifies the term physiological. Occurring more particularly in young men from fifteen to twenty years old, it is not always unassociated with other symptoms. There are often rapid growth and development, and a feeling of debility not infrequently accompanies these. It is even less easily explained than the albuminuria of the newborn.

The last variety deserves, least of all, the term normal albuminuria, although it is so often unaccompanied by any other symptoms of ill-health. An increasing number of such cases is daily reported, but although, according to Senator, albumin is found in the urine of from ten to twenty per cent. of apparently healthy adults, we insist that it cannot be regarded as a normal phenomenon. Certainly he who has it, is not so well off as he who has it not, and while active treatment may not always be judicious, yet there are many acts in life which may be performed without risk by one in whom the condition does not exist, but which should be avoided by the subject of such an albuminuria.

These albuminurias are always small, and sometimes accompanied by a few hyaline casts. Among the conditions sometimes associated with them, and which may be said to be more or less responsible for them, are great muscular activity, the ingestion and digestion of highly albuminous foods, mental excitement, and cold bathing. Hence such albuminurias are often intermittent.

The effect of cold baths in producing albuminuria has scarcely excited sufficient attention, and the fact that they do produce it is too often overlooked by physicians in their advice to patients concerning bathing. Long-continued immersion, of course, tends more strongly to produce it, and an existing albuminuria, whether it be of the kind called normal, or the result of recognized renal disease, emphatically and totally contraindicates cold bathing.

### POLYURIA.

By WILLIAM PEPPER, M.D., LL.D., Provost of, and Prof. of the Theory and Practice of Medicine and of Clin. Medicine in the Univ. of Penn.

From the *Med. and Surg. Reporter*.—Polyuria, or diuresis, is also called diabetes insipidus, but there is no excuse for this term. Insipidus simply means not sweet, while the use of the term diabetes at once introduces confusion. It should be termed polyuria, or diuresis. In this affection there is excessive urination, with the secretion of urine of low specific gravity, sometimes 1005 or 1008, and sometimes as low as 1002 or 1001. I have seen it

as low as 1000.5. It is almost colorless, and at times almost like spring water. It contains no abnormal ingredient, no sugar, and no albumin. The normal constituents are present, sometimes in full quantities in the course of the day, sometimes somewhat decreased.

The quantity of urine passed by such patients varies from five to fifteen pints, or even more. Diuresis occurs under various conditions. It may occur as a temporary condition in dropsical affections. A patient with an ovarian cyst will sometimes suddenly have a diuresis, with the discharge of all the contents of the cyst. I have seen this several times. In the same way, in hydrothorax and ascites, diuresis may occur, and the effusion disappear. It also sometimes occurs as a means of crisis in fevers and inflammatory diseases. A fever may terminate and copious urination take place. I have seen the finest instances of this in small-pox at the close of the eruption, when the quantity of urine has suddenly gone up to 200 or 300 ounces of spring-water-like fluid, and the patient returns from his bloated appearance to a natural condition, and may even appear shriveled.

Polyuria is a symptom of kidney disease, particularly of interstitial nephritis. As I have frequently told you, there may be scarcely a trace of albumin in the urine in this form of renal disease, but sooner or later careful examination will show the presence of albumin, and you will also find the cardiac affections, the rigid arteries, the increased arterial tension, and the other conditions which go with that general disorder of which interstitial nephritis is the chief local lesion.

Diuresis also occurs as a separate affection and not associated with the conditions mentioned. It is then largely under the influence of the nervous system. The influence of the nervous system in producing copious urination is seen in hysterical cases and in depressed neurasthenic patients. There seems to be in some cases a deranged condition of the nerve centres and ganglia which control the circulation of the kidneys, and which thus allow an excessive drain of liquid from these organs. We find this disorder occurring in persons with sensitive nervous systems, usually anæmic, often with impaired digestion, and with a tendency to other nervous symptoms of a depressing type.

The diagnosis of this condition is of course very simple. The patient passes water often and in excessive quantity, of light color, low specific gravity, and containing no abnormal ingredients.

There are few, if any, general symptoms. The affection may last a long time and have very little effect upon the general health. The possibility of interstitial nephritis must always be borne in mind and carefully excluded.

If we can exclude nephritis, diabetes and serious intra-cranial trouble, the prognosis of this condition is favorable.

The treatment consists in the first place in careful attention to the general health, the removal of depressing causes, and the regulation of the diet. The digestion is to be improved and the anæmia removed by the use of suitable remedies. In these cases ergot produces good results and can be recommended. It is perhaps the best remedy for this affection. It should be given in increasing doses according to the tolerance of the system. So, too, we find that the bromides of the alkaline bases, the bromides of arsenic, of iron and of zinc, are all valuable in this condition. You will select one or the other according to the general condition present. The use of hydrotherapeutics, suitable bathing, and friction, is very desirable. The use of electricity is also serviceable, a mild galvanic current being employed.

The disease is not a very common one, and is more frequent in the young. It may have a varied significance. It is a symptom of different morbid conditions, so that its management will vary according to its particular pathological relations.

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#### ALBUMINURIA—ITS CAUSES AND VARIETIES.

SENATOR, in the *Berliner Med. Wochenschrift*, enumerates the following conditions liable to determine the presence of albumin in appreciable amount in the urine:

**Disturbances of the renal circulation.** High pressure, if the urine be concentrated, should produce albumin. This condition is actually found to obtain by muscular action, on account of perspiration and loss of fluid by the lungs, and though not so accurately, by elevation of temperature.

Passive hyperemia acts in itself similarly to increased arterial tension, but the distended veins in the medulla of the kidneys press together the urinary tubes, leading to obstruction of the passage of urine and edema of the kidneys. The consequence is:

*a.* That albumin transudes from the interstitial capillaries into the urinary tubes.

*b.* The urine exerting pressure upon the glomeruli produces a diminution of pressure from the glomeruli, and leads to a relative increase of excretion of albumin. To this cause of albuminuria is allied that caused by blocking of the urinary tract, manifested when the impediment is removed, or when the obstruction is not complete.

*c.* The condition of the filtering membrane, as in inflammation, fatty degeneration, and amyloid change. Not only does albuminuria result from an increased permeability, but the degenerated membranes and epithelium themselves appear in the urine as albumins, and this may explain the fact that in the urine albumins may have a different relation to each other from what exists in the blood. The substance of the epithelium appears to contain a body intimately allied with globulin.

*d.* The composition of the blood may cause the appearance of albumin, *e. g.*, from an excess of nutriment, from increased dissolution of albumin, or from excessive secretion of water elsewhere, etc. It is held by Rosenbach, that the composition of the blood is constantly regulated by the action of the kidneys, and that inassimilable albumin is excreted by the kidneys. Albuminuria not caused by inflammation this author designates as "regulatory." His idea, though important, is not free from objections.

Finally, as Stokvis and Lehman have pointed out, the excretion of albumin can act injuriously on the kidneys.

*e.* Mention has already been made of the influence of temperature in connection with changes of pressure.

The author further remarks that the forms of albuminuria may be clinically divided into two classes, pathological and physiological, although no exact line of demarkation distinguishes them. Among physiological albuminurias may be mentioned that of the new-born, which is probably due to the suddenly increased pressure in the glomeruli, taken in connection with the probably increased destruction of the blood-corpuscles.

Albuminuria can exist in a healthy man for years without any sign of ill-health, and then cease.

Fürbringer, too, has found this condition in children, in whom chronic nephritis is very rare.

The author, in this connection, alludes to the albuminuria due to mental perturbation and to that caused by cold baths.

Pathological albuminuria includes the following:

1. That present in non febrile diseases, in which the composition of the blood is specially concerned, and in which the kidneys do not participate to any extent; in anemia, leukemia, and pseudo-leukemia; in scurvy, in icterus, and in certain cases of diabetes. Nothing is found in the urine indicative of renal disease.

2. Albuminuria in the non-febrile nervous diseases, in epileptic seizures, delirium tremens, cerebral apoplexy, neurasthenia, migraine, Basedow's disease, etc., and allowing for other existing causes, numerous cases exist where the albuminuria is traceable only to the nervous condition.

3. Febrile albuminuria. In this condition there is a combination of favoring causes, such as high temperature, febrile changes in the circulation and in the composition of the blood, with consequent disturbance of the nutrition of the kidneys, and, lastly, concentration of urine.

4. Albuminuria is passive hyperemia.

5. That due to blocking of the urine.

6. The albuminuria of pregnancy due to various causes, disturbances of the lesser circulation, passive hyperemia due to abdominal pressure on the vessels, and constriction of the ureters.

7. That due to diffuse inflammation and degeneration of the kidneys (acute nephritis, subacute, chronic and amyloid degeneration).

8. That depending on circumscribed affections of the kidneys, such as infarcts, abscesses, and tumors.

In conclusion, the author insists on the necessity of constantly remembering that the treatment of each individual case of albuminuria varies with the exciting cause.

### IDIOPATHIC PYELITIS.

By EDWARD T. BRUEN, M.D., Assistant Prof. of Physical Diagnosis in the Univ. of Penn.

From the *Philadelphia Medical Times*, October 17, 1885:—The diagnosis of pyuria is comparatively easy, although the exact cause of the pyuria is often obscure. In the first place, let me give you the special points that would indicate that the pus was formed in the kidney rather than in the bladder, and then I shall speak of the causes of pyelitis. When pus originates in the pelvis of the kidney, it will in all probability be passed mixed with urine, which will preserve its normal reaction, being either neutral or acid. On microscopical examination, the pus-cells will probably be found not associated with many of the epithelial cells of the genito-urinary tract. Let me here call your attention to a point which is of some consequence where the pyelitis is recent: it is that the pus-cells are usually round in what we might call the physiological type. An unfavorable deduction is always to be drawn if the pus-cells are irregularly shaped.

In this case we have the ordinary pus-cells, giving us the idea that the cause of the formation of pus is recent. Such signs would indicate simple pyelitis. But suppose that associated with pyelitis there was a suppurative process going on in the kidney, what would be the evidence of such process? Probably the formation of a few casts, as a rule accompanied by some renal epithelium. Such appearances, indicating involvement of the kidney-substance, are quite important to recognize in connection with pyelitis. The points which would indicate that the pus came from the bladder would be the following: pus from the bladder is usually mixed with the epithelial cells of the bladder, and it is also mixed with mucus, for in cystitis there is a formation of a large quantity of mucus. Further than this, the reaction of the urine will probably be alkaline. This alkalinity is produced by the presence of volatile alkali, such as ammonia, which is characteristic of the alkalinity due to cystitis. The ammonium carbonate is developed in the bladder by fermentation of the urine, which is brought about either by the presence of bacterial organisms or by the formation of a ferment in the bladder. The presence of this volatile alkali is shown by the existence of crystals of ammonio-magnesian phosphate. In addition, the urine will be passed frequently, and its passage will be attended with pain. There will also be in such cases a constant desire to urinate. This man has not had these symptoms.

There is one other point to which it may be well to allude, although it does not strictly come up in this connection: that is, the recognition of pus in the urine from the prostatic portion of the urethra. It seems to me that the most reasonable way of estimating the source of the pus is by separating the urine into two portions, having the patient pass the first portion into one vessel and the remainder into another. If the pus comes from prostatic disease it will be found in the first portion, while the second portion will be free from pus. In other respects the urine of prostatitis has the same general characteristics as the urine of cystitis.



## THE DIAGNOSTIC VALUE OF THE SPECIFIC GRAVITY OF URINE.

Dr. CHARLES F. NORTH, of Chicago, Ill., in a letter to the *Medical Record*, says:—There is probably in our country many a busy practitioner, who, to determine the presence or absence of sugar in the urine, contents himself with taking the specific gravity of the latter, and draws his conclusions therefrom, without making any chemical test whatever. Let us see whether such a method of examination alone to determine the presence or absence of sugar in the urine is advisable. Physiologists and physiological chemists tell us that although the average specific gravity of healthy urine is about 1.015 or 1.020, it can, under certain circumstances, be as low as 1.002 or as high as 1.030, without containing anything of a pathological nature. As is well known, the amount of fluids taken into, and given off by, the system, influences very decidedly the specific gravity of urine, and in the extreme figures already quoted, viz.: 1.002 and 1.040, the difference was due in the one case to drinking large quantities of fluids, and in the other, to total abstinence from water for a given time.

The quality and quantity of solids taken into the system also affect the specific gravity of the urine.

Temperature changes have also an effect on the specific gravity of urine outside of the system although for the practising physician they are perhaps of no value. The limits within which the specific gravity of urine may vary in acute cases of Bright's disease are even farther apart than in health. Where the daily quantity of voided urine is less than in health, we find it averaging about 1.025, and in cases where the quantity is greater than in health, as low as 1.005. Bartels found several times, at the commencement of the disease, 1.031, Bright and Frerichs 1.032; Gorup-Besanez 1.035, and Heller as high as 1.047. These figures show clearly how great is the range of the specific gravity in acute cases of Bright's disease. In the early stages of chronic Bright's disease, he who considers a high specific gravity of urine as sufficient evidence of the presence of sugar, can, and would probably, very often, err greatly in the diagnosis, for the specific gravity then is often between 1.020 and 1.030 and sometimes as high as 1.040 and even 1.044.

Dr. North then turns from those cases which show a high specific gravity of urine, but by the tests usually adopted in the clinics contain no sugar, to those in which sugar is easily proved to be present, and in several cases of glycosuria the specific gravity of the urine was so low that an examination with the urometer would have revealed nothing that could have lead even to a suspicion of the presence of sugar.

Perhaps some of the following remarks on, and cases of, diabetes mellitis, will illustrate this more forcibly. In regard to the quantity, color, specific gravity, etc., of the urine of persons suffering from diabetes mellitis, v. Frerichs tells us that the daily quantity of voided urine is sometimes normal, although generally exceeding that of health; that this quantity usually ranges between two and five litres, although he has seen cases where the amount was twelve and thirteen, and even as much as fourteen litres. But he says, this must be borne in mind, that this increase is by no means a necessary symptom of the disease, for there are severe cases of diabetes in which, even unto the lethal end, a noticeable increase of urine is never present. The specific gravity is almost always higher than in healthy urine, and ranges from 1.020 and 1.025, very often up to 1.030 and 1.040, and occasionally is as high as 1.050, and in a very few cases as high as 1.055; *but it must not be forgotten that there are cases of diabetes in which the urine shows a specific gravity of 1.010.* From all this, it seems to me, the fact must be patent to anyone knowing anything of medicine, that the specific gravity of urine may be so variable, even in diabetes mellitus, that it has little diagnostic value, and absolutely none as a means of determining the presence or absence of sugar.

I have elsewhere endeavored to show that a high specific gravity is no evidence of the presence of sugar. If, therefore, a low specific gravity of urine is no evidence of the absence of sugar, and a high specific gravity is no evidence of the presence of sugar, then clearly the methods adopted to prove the presence or absence of sugar must be something other than those determining the specific gravity.

## HÆMATURIA.

Dr. J. B. WALKER (*Med. and Surg. Reporter*) Nov. 21, 1885), Phys. to Philadelphia Hosp., clinical report: *Remarks*.—Bloody urine may be caused by lesions of the urethra, bladder, ureters, or kidneys. If the blood came from the urethra, it would be also discharged between the acts of micturition; if from the bladder, besides that incorporated with the urine, there would be passed a few drops subsequent to the act; this would be the case usually, but not invariably. The fact of the urine being alkaline is in favor of a cystic origin (of cystitis), but at the same time it is not against a renal origin. When the urine is purulent and at the same time acid, the pus is undoubtedly from the kidney. When the blood comes from the kidney, and is small in amount, it will give a smoky appearance to the urine, while if the amount be larger, discoloration will be well-marked. If this blood were cystic there would be other evidences of cystitis, which are here wanting. We must exclude chronic cystitis because the attack came on suddenly, and in simple cystitis we rarely have hæmaturia; in very severe inflammation of the bladder we may have bloody urine, but then the other symptoms will be well marked. Concretions passing from the kidney may irritate and wound the ureter, thus giving us blood, but here we have no history of renal colic. The kidney is subject to acute congestion, and we thus account for the blood. We may have paroxysmal or intermittent hæmaturia especially in those who have a tendency to kidney derangement. It is not uncommon in connection with periodic fevers. This is a simple case of congestion of the kidney from cold. These cases tend to spontaneous cure under favorable conditions. The therapeutic indication is to keep the urine alkaline. When these cases are somewhat severe, we may apply poultices to the loins, and give aromatic sulphuric acid or ergot, or, if there be any malarial condition, quinine.

## UROGLAUCINE IN THE URINE IN SCARLATINA.

From the *Jour. Amer. Med. Ass'n.*, Nov. 21, 1885 (Editorial).—M. PIERRE APÉRY, of Constantinople, calls attention, in *Les Nouveaux Remèdes*, of November 1, 1885, to the presence of uroglaucine (indigo blue) in the urine of scarlet fever patients. In a series of twelve analyses of urine from as many cases of scarlet fever, he found in every case a greater or less quantity of this substance deposited in small blue masses, which are so distinctive that they can scarcely be confounded with any other substance. So far as we are aware, Apéry is the first to announce the presence of the former in the urine of scarlet fever.

Uroglaucine may be recognized by filtering the urine and the deposits. The filtrate is then dried, and treated with boiling alcohol. This dissolves the blue materials and is colored violet, and on evaporation the uroglaucine is left with certain other matters, which are washed off with cold water. The uroglaucine is again treated with boiling alcohol, and by careful evaporation the small blue crystals are obtained (Yvon).

It seems that it must be regarded as a product of the decomposition of indican or uroxanthine, which exists, according to Ritter and some other chemists, in small quantity in normal urine, but is increased in certain pathological states.

It need scarcely be said that if Apéry's discovery be confirmed by other observers, it will be an important addition to our means of diagnosing scarlet fever, which often varies so much in its symptomatology in different cases and epidemics that peculiar difficulties are sometime presented in recognizing it. It is to be regretted, however, that Apéry does not indicate the period in the course of the disease at which uroglaucine first makes its appearance in the urine; and whether it is absent in those affections from which scarlatina is to be diagnosed.

# SURGERY.

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## OPERATIONS, APPLIANCES, DRESSINGS, ETC.

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### A CONTRIBUTION TO THE TREATMENT OF CERTAIN FRACTURES OF THE BONES OF THE LEG AND OF THE PATELLA, BY DRILLING AND WIRING OF THE FRAGMENTS

By J. WILLISTON WRIGHT, M.D., Prof. of Surg. in the Med. Dep. of the Univ. of the City of New York; Visiting Surgeon to Bellevue Hospital, Etc.

From the *N. Y. Med. Jour.*, October, 1885.—The following five cases of compound fracture of the bones of the leg, together with three of simple fracture of the patella which I have treated during the past three years by drilling and wiring of the fragments, are presented, not so much with the view of taking a new departure in the management of this class of injuries as for the purpose of inviting a discussion of the subject at large, and with the object of determining, as far as may be from a limited amount of material, whether the method by wiring in the worst cases of compound fracture of the leg, and in certain exceptional cases a simple fracture of the patella, to which the plan has been restricted in my own practice, possesses any advantages over the older and more usual means of treatment, either in the way of greater safety to life, additional opportunities for avoiding an amputation, primary or secondary, in favoring the reparative processes, or, finally, in the direction of a saving of time and a mitigation of suffering for the patient.

CASE II.—Nellie Murphy, Irish, tailoress, aged thirty, good health. Her left knee has been partly flexed and ankylosed for several years past, due to an old synovitis.

February 15, 1884.—Fell down stairs to day and sustained a fracture of the left tibia just below the tubercle, compounded by an opening in the skin one inch in length; fracture slightly oblique, with considerable displacements of fragments. Another simple fracture of the same bone was discovered at the junction of the lower and middle third.

16th.—Under bichloride irrigation, an incision, three inches long, was made at the seat of the upper fracture, over the crest of the tibia.

The soft parts were not seriously lacerated, but considerable dissection of the connective tissue had taken place from a large amount of effused blood.

The wound was thoroughly cleared of clots and cleansed; the fragments were drilled and wired together with a double strand of No. 26 silver wire. Wound closed with catgut, drained through counter-opening; limb dressed antiseptically and suspended.

In this case I ventured to predict delayed union of the upper fracture on account of its locality and from the fact of its being complicated by another

fracture lower down, my experience in similar cases having taught me that any fracture at the upper end of this bone is less likely to unite promptly *ceteris paribus*, than one in the middle of the shaft, due, probably, to its greater distance from the principal trunk of the nutrient artery; and, furthermore, that when a multiple fracture is present, the one which is nearest to the nutrient foramen will be the first to unite; or, in other words, the lower fracture, under these conditions, seems to appropriate to itself whatever reparative material is brought to the injured bone through this channel, leaving the upper fracture mainly dependent upon the small vessels which have first ramified in the periosteum before entering the bone.

17th.—Temperature 101.4°.

26th.—Temperature normal since last report. Dressings changed to-day for the first time (eleven days). No pus; wound healed; tube removed and new dressing applied.

March 15th.—Dressing removed; union of fracture not firm; plaster splint applied.

Subsequent History.—The lower fracture united with slight deformity, owing to the impossibility of keeping the lower end of the middle piece in position, in about the usual time; but the union of the upper fracture was delayed for many weeks.

Patient discharged July 26th (five months after wiring), able to support the weight of the body on the limb.

November 20th.—Union not absolutely perfect, but patient able to walk well by the aid of a cane.

CASE III.—*Fracture of the Patella*.—J. H., laborer, American, aged thirty-three, healthy.

June 10, 1885.—Six months ago patient was thrown from a wagon and sustained a transverse fracture of the right patella. The knee-joint is now nearly useless; the fragments are three inches apart, and apparently held together by a very thin fibrous band. Joint opened under irrigation; the fractured surfaces freshened, and the fragments drilled in two places, wired, and the limb put up like the others. The patient had no constitutional disturbance whatever as a result of the operation. At the end of ten days the wound was dressed and found healed throughout; drainage-tubes removed and joint redressed.

29th.—Limb put up in plaster splint.

Patient left hospital about the middle of July, still wearing splint, but apparently with good bony union of the fragments.

The chief points of interest in these cases are, first, the facility which the method affords for the removal of blood-clots, foreign bodies, and torn tissue, thereby leaving a comparatively clean wound, which is likely to repair with little, if any suppuration or sloughing, provided the operation is done antiseptically.

Secondly, the ability which it gives the surgeon to effect a complete and immediate reduction of the fracture, and the subsequent maintenance of the fragments in perfect apposition by means of the wire suture—an important indication, and one which it is impossible to fulfill in many cases by other means; and the consequent avoidance of such irritation of surrounding soft tissues as must necessarily occur when rough fragments of bone are allowed to move more or less upon each other.

Thirdly, the avoidance of frequent dressing, which always necessitates the disturbance of the reparative processes to a greater or a lesser extent with each repetition; the increased probabilities of speedy union when the fragments are securely put together and held in apposition during the whole course of the treatment, not to mention the saving of pain for the patient, and of time and trouble for the surgeon.

Fourthly, and perhaps most important of all, the ability which the method gives to the surgeon to save certain limbs, the seat of bad forms of compound fracture, which would otherwise seem to demand primary amputation, or which, if treated in any other way, might seriously endanger life from prolonged suppuration, sloughing of soft parts, necrosis, osteo-myelitis, septicæmia, pyæmia, etc.

### FRACTURE OF THE PATELLA TREATED BY WIRING THE FRAGMENTS.

Dr. F. S. DENNIS, of New York, Surg. to Bellevue Hosp., (*Medical News*, Oct. 1885), reaches the following conclusions:—(1) In compound fractures of the patella there is not the slightest doubt of the propriety of the operation. (2) In recent and old fractures, under ordinary circumstances and with the patient's consent, it is wholly justifiable. (3) In debilitated patients and those suffering from organic diseases, the operation should not be performed. (4) It is not an operation which can be indiscriminately performed. It should never be undertaken by the inexperienced or by those who have not the most complete faith in the efficacy of antiseptic surgery. (5) Success depends on the most thorough carrying out of the minutest details of the antiseptic procedure. (6) While the number of cases is as yet limited, the more and more extended adoption of the operation by the surgeons of America will soon cause it to be universally regarded as a most marked advance in treatment.

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### A SIMPLE FRACTURE OF THE PATELLA TREATED BY WIRING THE FRAGMENTS; A SECOND FRACTURE TREATED BY SUTURING THE FRAGMENTS WITH CATGUT.

Dr. L. A. STIMSON (Proceedings of *N. Y. Surg. Soc.*, published Nov., 1885), presented a man, twenty-one years of age, in whom he had had the opportunity of observing the condition of the knee-joint two months and a half after the patella had been wired for a simple fracture. The patient came to Bellevue Hospital last June with simple fracture of the patella, and was treated by one of Dr. Stimson's colleagues by making a transverse incision and wiring the bone with silver wire, two sutures being inserted. The case did perfectly well, and the patient recovered without any elevation of temperature or manifestation of trouble in the joint. When Dr. Stimson first saw him, two months and a half after the operation, the fragments were closely united, without independent mobility, and the patient was walking about the wards with a condition of the knee which allowed the joint to move through the arc of a circle of about 20°. About one week afterward, while descending the stairs without falling, stepping down with the sound leg forward, he fractured the patella which had been broken. In the second fracture the old cicatrix was torn open. Dr. Stimson enlarged the wound, and found that the second fracture had taken place exactly in the line of the first; one wire was entirely, the other almost entirely, loose in the wound, and the site of each was marked by small cavities in the fragments. The surfaces of fracture were not so rough as usual, and Dr. Stimson thought that union had taken place, in part at least, by a very thin intermediate layer of fibrous tissue. On the inner corner of the upper fragment, where in the first fracture there had been a small loss of tissue, there was a distinct fibrous band, as large as his little finger. On wiping out the blood he saw a membrane of new formation underlying the patella, and entirely separating the fracture from the cavity of the joint, except at one point, where it was torn for half an inch; through this opening he was able to see false membranes within the joint connecting the condyles of the femur with the tibial head. He cleansed the wound, brought the fragments together with catgut and closed the wound, and the patient was now well. The fragments had again united, and there was some mobility in the joint. It was now two months since the second fracture. The reason Dr. Stimson reported the case was because he had seen not long ago the statement that there was no case known where any membranes of new formation had formed in the joint after wiring of the patella for simple fracture. But this joint was full of them, and they had formed without any inflammatory reaction or any symptoms indicating their formation. Again, it has been stated that a patient with a fracture of the patella treated by wiring could be dismissed cured at the end of four weeks. Dr. Stimson did not know of any other similar fracture which was

perfectly sound at the end of so short a period of time, but here was a case in which two months and a half had elapsed since the fracture, which had done well, and which, if reported two or three months ago, at the stage at which most cases had been reported, would probably have been cited as another example of the safety and value of the method of treating by wiring, and yet the union proved not to be strong enough to bear the weight of the body in descending stairs, and the joint did not allow of more than 20° or 30° of flexion.

#### FRACTURE OF THE STERNAL END OF THE CLAVICLE.

Dr. HAL. C. WYMAN, Detroit, Mich. (*Medical News*, Nov. 1885), reports a case and says:—Notwithstanding carefully adjusted compresses of both hard and soft materials, the sternal fragment of the clavicle would rise into the neck, apparently pulled there by the action of a few fibres of the sterno-cleido-mastoid. The consequences of this displacement have been described above, and, in my judgment, they constitute the distinctive difficulties to be encountered in cases of fracture of this particular part of the clavicle. The relation which the sternal end of the clavicle bears to the sterno-cleido-mastoid muscle makes it almost impossible with any appliance to get a leverage sufficient to hold the fractured surfaces in contact. Movements of the head and neck will be more likely to cause displacement than will movements of the shoulder.

With a view to getting the minimum of deformity and inconvenience from fracture in this region, should it come under my observation again, I would use a plaster-of-Paris dressing of sufficient firmness and extent to control those movements of the head which are due to contraction of the sterno-cleido-mastoid muscle. Such a dressing could not be more cumbersome than the plaster-of-Paris apparatus that is sometimes used to immobilize the shoulder-joint. Subcutaneous section of the fibres of the sterno-cleido-mastoid muscle which attach to the clavicle—making a compound fracture, may, in some instances, be advisable.

#### BANDAGE FOR THE FIXATION OF THE HUMERUS AND SHOULDER GIRDLE.

Dr. LEWIS A. STIMSON, of New York (*Medical News*, Nov. 1885).—Dr. Cabot's note in your issue of October 31st, on the bandage for fixation of the humerus and shoulder girdle, described by Dr. Dallas, leads me to say that in my experience the object of the bandage, so far as it relates to making "pressure upon the top of the shoulder and at the same time driving the humerus strongly up toward the socket," can be very effectually and, I think, more conveniently attained by a strip of adhesive plaster passing from a point between the shoulder blades, over the top of the shoulder, down the front of the arm, under the elbow, up the back of the arm, and over the shoulder again, to the chest in front. I have used this dressing in dislocations of the acromial end of the clavicle, fracture of the clavicle close to that joint, and in fracture of the humerus high up without displacement, and have been entirely satisfied with its action.

#### A CONTRIBUTION TO THE ÆTIOLOGY OF MALIGNANT TUMORS.

Dr. R. J. HALL read the following paper (*N. Y. Surg. Soc.*, Oct. 1885):—So much of an almost purely speculative character has been written during the last few years on the ætiology of malignant tumors that, did this paper contain merely a new hypothesis, I should scarcely venture to present it to the society. It consists, however, chiefly of a series of cases, most of which have come under my own observation, which, in my judgment, strongly support that hypothesis which is slowly but surely working its way into the

minds of most thinking pathologists and surgeons. I refer to the hypothesis which attributes these mysterious neoplasms to a specific virus, in all probability a micro-organism.

Without stopping to give an accurate definition of the term tumor in general, it may be sufficient to say that by malignant tumors we mean such as invade the neighboring tissues and produce metastases, and that all such tumors are included in two great classes, carcinoma and sarcoma. In regard to the first of these, almost all pathologists have accepted Waldeyer's view, that the cells which occupy the alveoli are epithelial, and the tumors therefore essentially of epithelial origin; while there is no doubt whatever that the sarcomata are built up of connective-tissue elements.

The theories hitherto formulated in regard to the origin of these tumors have been so well classified by Dr. H. F. Formad, in an exhaustive paper on the same subject (*Ætiology of Tumors*, "Trans. of the Path Soc. of Phila.," Sept., 1879, to July, 1881), that I can not do better than reproduce his classification. Under each heading he has given a list of the pathologists who have supported the hypothesis. The list is as follows:

1. *Predisposition and Inflammation Theory*.—Virchow, S. D. Gross, Woodward, Samuel, Wagner, Birch-Hirschfeld, Cornil and Ranvier, Perls, Tyson, S. W. Fitz, Gross.
2. *Dyscrasia Theory*.—Rokitansky, Paget, Bilroth, Simon.
3. *Embryonal Theory*.—Cohnheim, Thiersch, Waldeyer, Lücke, Masse, Hasse, Epstein.
4. *Idiopathic or Spontaneous Theory*.—Rindfleisch, Stricker, Nancrede, Payne.
5. *Nervous Theory*.—Van der Kolk, Lang, Snow.

The nervous theory is, I think I may safely say, too fanciful to merit discussion, except when considered as a possible pre-disposing cause. The idiopathic and dyscrasia theories mean nothing, the terms themselves being mere words which either confess our ignorance or serve as a cloak to hide it. Cohnheim's, or the embryonal theory, which has lately fallen into some discredit, undoubtedly offers a satisfactory explanation of the origin of some benign tumors, and may afford a beautiful explanation of one of the facts in regard to the structure of many malignant tumors apparently most difficult to reconcile with our hypothesis. For, if in certain regions, as the parotid, embryonic remains are of frequent or constant occurrence, and in others occur rarely or not at all, we can understand why in the one case the same irritant should give us a mixed, and in the other a simple tumor.

There remains, then, only the predisposition and inflammation theory. Under the great authority of Virchow, pathologists have been ready enough to accept this last as a sufficient explanation; that they have been, and are still, very slow to recognize that the inflammation is of a specific kind, is due, I think, chiefly to the several causes. [Dr. Hall discusses these causes. He favors, if not adopts, the view that malignant tumors are due to a specific cause—a micro-organism—and are contagious.—Ed.]

#### IS WIRING THE FRAGMENTS ATTENDED BY SUCH SUCCESS AS TO MAKE THIS METHOD THE RULE IN THE TREATMENT OF SIMPLE FRACTURE OF THE PATELLA ?

This question was discussed recently in the *N. Y. Acad. Med. (Medical Record*, Nov., 1885), in the Section on Surgery.

Dr. JOHN A. WYETH formulated his views in answers to the following questions:—(1) Can simple fracture of the patella be treated by a method which will secure a perfectly useful limb without danger to the patient's life or limb? (2) If so, what is that method?

In the history of surgery, the first question had been answered affirmatively thousands of times. By the use of the posterior splint, obtaining ligamentous union, he had never treated a case which did not result in a useful limb; that is, one which permitted the patient to perform his usual work without very marked inconvenience.

Thus the second question was partially answered, but the method which he now employed and advised was Hamilton's; that is, the use of a posterior splint of some kind. This method positively incurred no risk to life or limb or comfort of the patient. The posterior splint should never be removed for at least six weeks. The dressing for the anterior aspect of the limb designed to hold the fragments in close apposition—such as the figure-of-8 application of the roller-bandage—should be inspected daily, to determine whether or not the desired approximation of the fragments was being maintained.

At the end of six weeks slight passive motion should be begun. The posterior splint should be worn for six months. Some form of splint which furnished a flexion-check must be worn for at least one year longer.

(3) Is a ligamentous union of one inch or less in length, properly obtained and protected for eighteen months, as strong as bone?

Hamilton says that it is, and Dr. Wyeth had several cases which showed that such a union was even stronger than bone.

(4) Does a ligamentous union, two or three inches in length, necessarily imply a loss of function? Ligamentous union was very apt to be followed by impaired or imperfect function, and sometimes loss of the function of extension altogether, but not necessarily so.

(5) Does wiring the patella secure a better limb than can be secured by other methods of treatment? Of course, if wiring is successful, and union by bone is complete, thick, and solid throughout, it is better than anything else.

(6) Is wiring a safe operation? After the study of reported cases, and in the light of his own sad experience, and from a study of the subject since 1882, Dr. Wyeth was as much convinced of the danger of the operation as he was of his own existence; and also that the benefit derived from a close co-aptation of the fragments was not great enough to warrant the risk incurred by opening the joint and wiring the fragments together.

(7) If it were a safe operation, would it be preferable to the method of treatment by the use of the posterior splint? Certainly, as between the two he would not hesitate to decide in favor of the latter method.

Some of the prominent objections to wiring were that the operation necessitated longer confinement in bed than the other method of treatment, as the patient must remain there six weeks or two months, with the leg in complete fixation. By Hamilton's method the patient is not confined to the bed for more than three or four days. With wiring the patella the patient is incapacitated for any kind of work for at least six months after the operation. Furthermore, he had recently seen a case in which synovitis was caused by the wires.

(8) Are there any cases in which wiring is permissible? Dr. Wyeth thought that the operation should be confined to fractures in which there was a wound communicating with the joint, and in which there must be drainage.

Dr. R. F. WEIR said that he had not had any experience in the performance of this operation. His surgical inclinations had rather leaned against it. When it was first proposed, it seemed to him that the gist of the question was with reference to the safety of the operation, and Lister claimed that he had sufficient practice in antiseptic surgery to enable him to place complete reliance on its safety. Dr. Weir believed that he had carried out the details of antiseptic surgery as thoroughly as was possible, and that he had had a fairly large experience in that field; and yet he could not feel that he had confidence in its absolute safety. He had not, therefore, felt that wiring the fragments in simple fracture of the patella was a perfectly safe operation. He had felt, that when treated with a well-secured posterior splint worn for a long period of time, at least three or four months, the case terminating in a separation of the fragments varying from one-fourth to one inch, a very good limb and result had been obtained.

The only argument which he could see in favor of wiring was the fact that occasionally, with a narrow bond of ligamentous union, when the limb is put to some extra motion, the other patella was liable to be fractured.

Dr. Weir would feel that, in addition to compound fracture of the patella,



where we were warranted in wiring the fragments, there was one condition which possibly might call for interference, namely, those cases in which union took place with half an inch or an inch of ligament, and the bond of union stretched and became three or four inches long. Although patients got along very well with such a great length of ligamentous union, occasional cases occurred in which there was an undue liability to do themselves injury, and therefore an attempt to bring the fragments into closer apposition might be justifiable.

Dr. A. C. Post had had no experience in wiring the patella, and had been very well satisfied with results obtained by the ordinary methods of treatment. He did not consider a limb as perfect with ligamentous union an inch or more in length as it would be with bony union, but it answered well in the performance of all ordinary functions. His opinion had been that wiring the fragments should be reserved for compound fracture and for old fractures with such laxity of the ligamentous union as seriously impaired the usefulness of the limb.

The Chairman, Dr. Stephen Smith, said that wiring the patella for fracture was a frequent operation in Bellevue Hospital. He was induced to perform it with a great deal of reluctance, but had done the operation seven times, and, so far as dangers were concerned, they had all been entirely satisfactory, no unfavorable symptoms of any kind occurring during the treatment. Three were cases of simple fracture, three were cases of old fracture with long useless ligamentous union, and the other was a case of compound fracture.

As far as he observed the three cases of simple fracture, the movements of the limb were not as free as he had seen after the same period of treatment by the posterior splint. He supposed that they would eventually have as free motion as the others. In one old case the amount of flexion was less than fifteen degrees, and the result of the operation was satisfactory.

The method of treatment which had always commended itself to him was that described by Dr. Weir, and it had given as near bony union as any except wiring. His own impression as to the danger of wiring was, that the operation was not attended by any danger at all. He had not seen any unfortunate results in his own practice, nor in Bellevue, where the operation had been performed eighteen or nineteen times, besides four or five cases in St. Vincent's.

As to how useful the limb became he did not know the general results, but in two of his cases motion was very free, but in a third case it was less free, yet was improving, and the patient was perfectly satisfied with the result of the operation. In Bellevue, passive motion had been begun as early as two weeks after the wiring; of course, practised very generally at first.

Dr. Weir asked the chairman if he would advise the operation in cases of simple fracture of the patella.

The Chairman said that he would not urge it, as he was not yet satisfied that the operation gave better results than had been obtained by other methods. But he would not hesitate to perform it on account of its being an unsafe operation.

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### THE DIAGNOSIS OF FRACTURES NEAR A JOINT.

This is oftentimes a very difficult matter, and has frequently caused the sweat of anxiety to bedew the forehead of the most experienced surgeon. Crepitus, deformity, and mobility, the three classical signs of fracture, Dr. Oscar J. Coskery tells us in the *Med. Chronicle* for July, are not unfrequently wanting. But there are three other signs that stand us in good stead; fixed pain, the site and quantity of the hemorrhage, and the perfect helplessness of the limb. It often happens, as for instance in fractures of the fibula alone, that we can observe no deformity, crepitus, or mobility, but, if we follow the line of the fibula up, at one certain point the tip of the finger elicits pain. If this is always complained of whenever pressure is made upon this point, he thinks the diagnosis is plain. The plan is evidently due

to the soft parts being irritated by the sharp edges of the fractured surfaces.

The second of these signs, the site and quantity of the hemorrhage, should be considered thus: The patients whose cases he details fell, striking upon the outer side of the limbs, and ecchymoses slowly made their appearance on the inner side, and then in considerable quantity. Had the bleeding been the result of the contusion alone, it not only would have appeared sooner, but at the point injured. As it was from the small and non-contractile vessels of the bone, the bleeding was longer in progress than it would have been in the soft parts, where, very probably, a larger vessel would have been ruptured. Again, during this slow bleeding the blood had time to gravitate to a dependent position, or direction of easiest escape.

The absolute helplessness of that portion of the limb that contains the broken bone is, probably, the most important of these signs. The fact that a patient has not made a step after the accident, or raised his hand above his head, is a strong point to start from in attempting the diagnosis.

There is one mistake that he has several times seen made in diagnosticating fractures of the femur. When the patient is told to raise his thighs from the bed he can do so by contracting the hamstring muscles, sliding the heel upon the bed, and thus the lower end of the femur is pushed up by the head of the tibia; but the *psoas-magnus* and the *iliacus* do not contract.—*Med. and Surg. Reporter.*

#### HOW SHALL THE PRACTITIONER DISINFECT HIS HANDS ?

A thoroughly efficient disinfection of the physician's hands, remarks the *Therapeutic Gazette*, is more than a matter of personal cleanliness: it is an absolutely required, though often neglected, protection of his own person and the safety of his family, friends, and patients. There being no dissenting voice as to the necessity of this by no means irksome precaution, the only question that can arise in this respect is, What method of disinfection insures the greatest success? The present state of bacteriology must convince even the most sceptic and conservative physician that soap and water exercise not the slightest influence over the microbial organisms, and that the true antiseptic agents have to be resorted to.

Forster, of Amsterdam, made some special researches in this field (*Pharm. Centralblatt*, May 28, 1885) with the view of ascertaining the relative worth of carbolic acid, boric acid, chloride of zinc, and iron. He gained the conviction that the ordinarily used two and one-half per cent. solution of carbolic acid, and even Billroth's plan to wash the hands in muriatic acid and ten per cent. phenol in glycerine, were insufficient to sterilize the hands, that is, prevent microbic growth on them. The only procedure which Forster found absolutely reliable was the one recently recommended by Koch, of Berlin, which consists in a solution of corrosive sublimate having a strength of seven to fifteen grains to two pints of distilled water. The simplicity of the manœuvre and its unquestionable prophylactic power will go far to recommend Koch's wash to the American practitioner.—*Boston Med. and Surg. Jour.*

#### THE COMPARATIVE RESULTS OF OPERATIONS IN BELLEVUE HOSPITAL.

By STEPHEN SMITH, M.D., Surg. to Bellevue Hospital.

From the *Medical Record*, Oct., 1885.—Having referred to the past and present methods of closing wounds and of after-treatment, Dr. Smith went on to say that if we followed the wounds treated by these two methods from the first to the last dressings, the contrast was remarkable. If the wound was large, fever formerly began on the second or third day, announcing suppuration, and from this date, for weeks after, the dressings were changed daily, one, two, or three times. The pus-basin, the irrigator, and the dressing forceps were in constant demand, and in many wounds the suppuration was so profuse that vessels were placed under them which received the continuous discharge. The fever generally ran high, with consequent

exhaustion and depression of the patient. Septicæmia, as now understood, was the intermediary fever of that day, and was regarded as a usual, if not a necessary, sequel of all considerable operations. Following this fever, or rather insidiously grafted upon it, were chills, fever and profuse sweatings, now recognized as pyæmia, but then regarded as only another step of surgical fever. Few indeed survived this fever; and in the diffused or metastatic abscesses revealed at the autopsy the surgeon discovered a cause of death quite beyond his power to prevent, control, or even comprehend.

The vast change in the progress of operated cases during the past ten years could scarcely be realized. Surgical fever, with all its disastrous variations, is, in practice, rare now in Bellevue Hospital. Pus, as an outcome of surgical operations, is a thing of the past. On one occasion, Dr. Smith said, a teacher in one of the medical colleges sent to the wards of Bellevue for a specimen of pus for exhibition to his class; but none was found in the four surgical divisions of the hospital, although there was at that time an unusually large number of wounds and operated cases under active treatment. The wound is now dressed with no expectation that fever will arise, that suppuration will occur, or that the dressings will require renewal on account of the presence of pus. The patient sleeps and eats well from the first, and the surgeon often removes the dressing only to find the wound united; a condition of affairs which is true not only of incised wounds but equally of wounds of amputations, excision, ligation of arteries, etc.

Turning from this review of the several stages of operations in general to particular operations, he said that many curious illustrations of the remarkable progress of practical surgery in this hospital are to be found; in proof of which he cited the treatment of compound fractures, in which amputation is now never thought of unless arteries and nerves are so far destroyed that death of the extremity must follow amputations, excision of the larger joints, and ligation of large arteries. In speaking of amputations, he said that an interne once made the statement that "a recovery after amputation of thigh had not occurred in Bellevue Hospital since the time that the memory of man runneth not to the contrary," a remark which, although not strictly true, had a painful significance to the surgeons of that period.

If the major operations are now performed with so much success, Dr. Smith went on to say, it follows that the minor ones are correspondingly successful; a good instance of which is afforded in the improvement in the treatment of cold abscesses. Perhaps the most marked illustration of the great improvement in operating surgery, however, is to be found in the unvarying success which attends the treatment of simple fracture of the patella, by wiring together the fragments; a procedure which embodies the very spirit and genius of the surgery of to-day, viz.: Boldness and audacity in the conception of an operation, and conservatism the most absolute in the methods and means employed in executing it. The operation is now accepted as legitimate, and no precedence, so inherently dangerous when performed according to old methods, has ever proved more successful.

After briefly referring to the success attending gynecological operations in this hospital, Dr. Smith concludes in the following language: In reviewing the surgical practice at Bellevue, it is not difficult to determine the essential feature of the present methods as compared with those of the past. Cleanliness is the one great object sought to be obtained in all operations. Whatever may be the final conclusions of scientific students as to the cause of putrefaction of wounds, practically, it is determined that the surgeon may, with the most absolute certainty, protect an ordinary open wound from suppuration. To effect this object, he finds that he has simply to resort to those measures which are known to secure perfect cleanliness of the wound. The agents now relied upon and found efficient are: 1. Soap and water to external parts. 2. Carbolic solutions for the instruments. 3. Bichloride solutions to all surfaces and tissues. 4. Iodoform for external dressings. We may summarize the conditions regarded as essential to success as follows, viz.: A clean operator, clean assistants, a clean patient, clean instruments, and clean dressings.

## THE IMPROPRIETY OF THE RECOGNIZED AMPUTATIONS ABOUT THE FOOT AND ANKLE.

By AP MORGAN VANCE, M.D., of Louisville.

From the *Louisville Medical News*.—Having for a long time considered the usual amputations about the tarsus and ankle joint unsurgical, I take this occasion with a very short and hurriedly-prepared paper to give my reasons for this opinion.

There are none of us who cannot recall to mind patients suffering with stumps which have broken down after moderate use, or have never healed after these amputations; and all who have had any experience in adjusting supplemental apparatus to this class of amputations can testify to the great difficulties often encountered before a comfortable fit is accomplished, this result often being impossible. There are none of us who do not remember to have seen the awkward and painful gait which results when it is attempted to adjust even a leather shoe to these stumps. I do not know how many times I have been applied to in the past five years by patients who had been compelled to return to crutches at various periods following amputations of this kind, either because of the contraction of the extensors, causing the cicatrix to be impinged upon, or from the breaking down of the bones from the primary injury, and sometimes renewal of disease where this was the reason of the amputation. Some will say that a tenotomy will always prevent the first named and most common of the difficulties, but all who have had any experience, especially in young subjects, know that relief thus gained is only temporary. The great awkwardness and many other inconveniences resulting from any of the recognized amputations between the mid-metatarsal region and four inches above the ankle-joint, are reasons sufficient to make a man think twice before doing any of them, but this is not the great reason why I always go to the junction of the middle and lower third of the leg rather than amputate at any point between this and the mid-metatarsal region. The infinite superiority of this amputation in comfort, usefulness, and appearance is, to my mind, unquestionable. With the most improved limb, a person with a leg amputation at this most eligible point can perform with comfort almost any task that one can do with two good limbs. Some will ask: Why not save two inches more of the leg? We answer, because that, to get the best mechanism, four inches space is required above the ankle-joint.

The dangers are not increased in leg amputations, but rather the reverse, in my opinion; and the time of convalescence is shortened very much.

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## ON THE TREATMENT OF FURUNCLES.

From the *Boston Med. and Surg. Jour.* (Editorial).—GINGEOT has contributed to the *Bulletin Général de Thérapeutique* (t. cviii), a valuable series of articles on the treatment of boils and carbuncles, of which the following is a summary. Brodie in his *Lectures on Pathology*, published in 1846, advanced the view that the furuncle was a species of eruption analogous to small-pox, and a local expression of a poison circulating in the blood. Alphonse Guérin in the article *Anthrax* in "Jaccoud's Dictionary" (1865), teaches that furunculosis is a septicæmia, and assigns to it an intermediate position between the general affections which localize themselves, and those which, becoming generalized, result from a lesion primarily local.

The contagiousness of furunculosis was established by Sturtin in 1866. He proved: (1) the auto-inoculation of the contagium by scratching; (2) the transmission from individual to individual by contact (as by occupation of the same bed); (3) the development of boils on the hands of surgeons and dressers consecutively to their being wounded with a bistoury which had been used in opening a furuncle. Lannelongue inoculated patients with matter from boils, producing at the point of puncture, furunculoid eruptions.

It is not only proved that boils and carbuncles can be transmitted from man to man by contagion, but the active principle of the contagion, according to Gingeot, has been discovered. For this discovery we are indebted to Pasteur, who, on applying to the furunculous affection the same means of study as had been applied by him to the investigation of the pathogeny of splenic fever, fowl cholera, and other virulent diseases, "has been able, to demonstrate that every furuncle contains certain aerobic microscopic parasites, and that it is to these that there are due the local inflammation and the pus formation." This microbe is called by Pasteur the *torula pyogenica*; this mycologist, moreover, identifies this bacterium with that of abscesses of the soft parts, of osteomyelitis, and of puerperal fever; certain it is, however, that the product of cultures of furunculous origin has never given rise, by inoculation in animals, to anything but simple abscesses, never to furuncles. Gingeot explains this fact by referring to the peculiarity of the tissue, (namely, the glandular apparatus of the skin, and especially the pilo-sebacious glands) where the furuncle has its seat; the inoculation of the microbes would have a different result according as such inoculation were made into a follicle, or into the subcutaneous cellular tissue. M. Loewenberg has repeated Pasteur's cultures and inoculation experiments, and has confirmed them; he has also shown the part played by hairs in the collection of germs. The view which he adopts and which Gingeot endorses, makes furunculosis a parasitic disease resembling scabies, and the old humoral notions respecting the etiology of boils and carbuncles are repudiated. It is, however, certain that furunculosis is attached by many bonds of union to the other virulent affections. A certain predisposition of constitution is necessary; the *torula* does not thrive unless it finds a favorable medium. This predisposition is found in certain debilitated states of the economy from overwork, alcoholism, diabetes, lithæmia, etc., in which there is such modification of the secretions of the skin as renders the piliferous and sebaceous glands a suitable habitat for the *torula pyogenica*.

The indications of treatment are: (1) if possible, to cause the furuncles to abort; (2) this indication being impossible of fulfilment, to moderate the amount of suppuration; (3) to antagonize the constitutional condition which favors furunculous productions.

There are two principles laid down as the fruit of large experience: first, never to open early; second, seldom or never to open, even if suppuration have taken place, but to leave the boil or carbuncle to nature. Since the furuncle is a parasitic affection, the essence of the treatment ought to consist in destruction of the parasite. One of the first precepts is to apply no poultices. Even when put on cold, the poultice has no power to stay the development of the furuncle, and when warm, it can only favor such development, as heat and moisture promote the vital activity of the lower organisms: moreover, the organic substances of which the poultice is made furnish a contingent of food to the parasite. Even when the boil has gone on to suppuration, the poultice is rather injurious than otherwise, aiding the penetration of new follicles by the microbe, by spreading the pus over the skin and keeping it in contact with the glandular orifices dilated by the heat.

One of the external remedies likely to be most successful in the abortive treatment of furuncle, and which Gingeot highly recommends, is the tincture of camphor. Both the alcohol and camphor in this preparation are excellent parasiticides. The camphorated spirit is applied to the part by means of a compress and allowed to remain in contact with the skin a few minutes. Thus treated, boils, if taken at the commencement, are frequently made to abort. The application should be made three or four times a day.

Another good agent for fulfilling the same indication is tincture of iodine, which should be painted freely several times a day over the furuncle and a little beyond. If applied till epidermic disquamation takes place, the iodine tincture does no harm, and if it does not always prevent, it certainly moderates suppuration, thus fulfilling the second indication and better than (perhaps) any other remedy. Gingeot believes that the iodine does good by its superlative parasiticide action; "the parasites cannot escape contact with the liquid which is introduced by capillarity into the glands, and by endosmosis into the acuminate vesicle of the top of the furuncle."

The same treatment is applicable in the early stage of carbuncle, and will often arrest its development; if, however, the progress of the carbuncle cannot be stayed, a strong solution of carbolic acid (equal parts of the strong acid and glycerine) must be brought in contact with the diseased tissue, as Dr. Eade, of London, recommends.

The central core or stem must be destroyed; this may be done by freely applying the carbolic acid through any openings which may exist in the centre of the swelling, or a sufficient opening may be made with acid nitrate of mercury.

When the furuncle is opened and discharging, the usefulness of tincture of iodine is ended. Then there is nothing better than boric acid applied in the form of fine powder, which is freely dusted over the boils, or of the saturated aqueous or alcoholic solution which is kept constantly in contact with the diseased parts by means of compresses soaked in the liquid.

As for internal medication, Gingeot has nothing better to suggest than the recommendation to follow out the line of treatment several years ago indicated by Dr. Sidney Ringer, and endorsed by Dr. Duncan Bulkley. This consists "in the administration from the first of sulphide of calcium in small doses (one-sixth or one-fourth grain) every two hours." It is worthy of note that in the excellent paper which Dr. Bulkley read at this meeting, he coincides very nearly with the line of treatment above briefly summarized.

### HYDRONAPTHOL: A NEW ANTISEPTIC.

By GEO. R. FOWLER, M.D., Surgeon to St. Mary's General Hosp., Brooklyn.

From the *N. Y. Med. Jour.*—Of all the substances which are at present known to have an inhibitory action on bacteria, and hence are in the true sense antiseptic, with the sole exception of corrosive sublimate, hydronaphthol is the most powerful. By reference to the following table, adapted from Sternberg by Pilcher, showing the comparative value of the agents named in their power to arrest the development of the micrococcus from pus, this claim will find undeniable corroboration. According to Sternberg, the other organisms of this class bacteria termo, etc., inhibited by about the same strength of antiseptic as that necessary for pus micrococci, and therefore this table may be cited for purposes of comparison:

TABLE OF MINIMUM STRENGTHS OF ANTISEPTIC AGENTS REQUIRED TO INHIBIT GERM-DEVELOPMENT.

Antiseptic agent.	Efficient in the proportion of one part to
Mercuric bichloride.....	35,000
Iodine.....	4,000
Sulphuric acid.....	1,800
Carbolic acid.....	500
Salicylic acid and sodium biborate, equal parts.....	200
Boric acid.....	200
Ferric Sulphate.....	200
Sodium biborate.....	100
Alcohol.....	10

According to the experiments above detailed, hydronaphthol is efficient in the proportion of between 1 to 6,000 and 1 to 8,000, and in the table just quoted would occupy the position next to mercuric bichloride. In other words, as an antiseptic it is about one-fifth as powerful as the mercuric bichloride; from one and a half times to double the strength of iodine; four times as strong as sulphuric acid; at least twelve times as efficient as carbolic acid; thirty times as potent as salicylic acid, when sodium biborate is added to the latter (for the purpose of increasing its solubility) in the proportion of equal parts of each; thirty times as powerful as both boric acid and ferric sulphate; sixty times as strong as sodium biborate, and six hundred times as strong as alcohol.

In making solutions for surgical use, it is my custom to add a sufficient quantity to a teacupful of hot water to super-saturate the same; this produces a milky mixture. Sufficient water at the ordinary temperature is then added to this to make it a clear solution. Or powders of seven grains and a half each, or compressed tablets containing the same quantity, may be at once dissolved in a pint of warm water. The latter would constitute a convenient and portable form for use in private practice. In my hospital service, the irrigator jars are kept about two-thirds full of the solution, having an excess of the hydronaphthol at the bottom. By adding a quantity of hot water to the solution just before it is required for use, a super-saturated solution is at once obtained. After the solution has been for a few days in contact with the excess at the bottom of the jar, the latter precaution may be found to be unnecessary. The saturated solution may be used for washing the site of operation, the surgeon's hands and those of his assistants after scrubbing with mercuric bichloride solution in case of suspected infection; for saturating towels for the purpose of isolating the field of operation; as a bath for the instruments; for washing the sponges and for irrigating the wound.

#### COMPRESSION MYELITIS OF POTT'S DISEASE SUCCESSFULLY TREATED BY LARGE DOSES OF POTASSIUM IODIDE.

By V. P. GIBNEY, M.D., Prof. of Orthopædic Surg., N. Y. Polyclinic.

From the *Med. Record*, October 24, 1885.—Let it be distinctly understood that I do not rely upon the drug alone. My patient must have an apparatus that will secure the maximum degree of fixation. The better the fixation the more rapidly the case will recover, other things being equal. Let me summarize the points in the management of a case of compression myelitis—points legitimately drawn from the experience I have recorded in this paper.

1. Secure at the earliest possible moment immobilization of the spine, especially in the neighborhood of the vertebræ diseased.

2. Begin with ten grains of potassium iodide in mineral water—Vichy, I think, is best suited for most cases—three times daily after meals.

3. Increase the dose daily by five grains, until the stomach shows signs of intolerance.

4. Maintain as large a dose as the stomach will tolerate until convalescence is fairly established.

5. Do not lose sight of the apparatus employed, and replace it without hesitation and without delay whenever its inefficiency is demonstrated.

6. Keep the patient in bed the greater part of the day, and if he goes out see that the recumbent, or at least a semi-recumbent position is maintained. Under no circumstances permit efforts at standing until convalescence is fully established.

7. See that the general health does not deteriorate while special treatment is pursued.

#### RESPIRATORY ORGANS.

##### EMPHYEMA.

Dr. J. G. HEILMAN (Philadelphia Clinical Soc.) reports a case, that of E. M., nine years of age. The pleurisy with pus in the pleural cavity followed measles. On June 28 the cavity was aspirated and 18 ounces of pus removed. To obviate the necessity of introducing the needle daily, Dr. Stone and Dr. Heilman introduced a trocar and canula and through the canula a soft catheter which was held in place with adhesive plaster, and closed with a "wooden peg" when not attached to the aspirator. Pus was removed daily from June 30th to July 8th; total quantity removed, 88 ounces; June 30th, 16 ounces; July 8th, 2 ounces. On the 14th of July the tube was removed.

The points of interest in the case are:

1. The length of time during which the lung was compressed, viz., *seven* weeks from the beginning of the effusion until the aspirator was first used; *eight* weeks before a regular systematic effort was made to remove the pus. Yet the lung steadily expanded as the pus was removed, and filled up the vacuum created.

2. The time required for the removal of the entire quantity of pus, *nine* days. There was no discharge after that time, and the tube might safely have been removed then.

3. No antiseptic solution was injected, indeed no attempt was made to wash out the pleural cavity. It is true that a small quantity of water (not more than f. 3 ij) was injected twice; but this was done for the purpose of removing any clots that might be obstructing the tube. I am aware that this was not in accord with modern teachings and practice, but it is difficult to see how antiseptic washes could have hastened the recovery of the patient. The aspirator in the treatment of these cases possesses, it seems to me, so many advantages that I can scarcely conceive of a case where we would be justified in resorting to the old method of open drainage. The simplicity of the operation in the one case, and its difficulty and gravity in the other, is a point worthy of consideration. It is a trifling matter to puncture the chest-wall with a small trocar and canula, but in a patient already exhausted often a most serious one to make two large openings and remove portions of the ribs. Cleanliness is another point for consideration. In the case just reported not a drop of pus escaped except when the aspirator was used. There was absolutely no unpleasant odor at any time, nor soiling of the patient's clothing, both so annoying where an open drainage-tube is used. A still greater advantage, in my opinion, is the control it gives the physician over the expansion of the lung. He can cause it to expand rapidly or slowly, at his pleasure. The expansion being a gradual one, those distressing symptoms which so often result from a sudden removal of the fluid are avoided.

#### SURGERY OF THE LUNGS.

From the *Boston Med. and Surg. Jour.* (Editorial).—More than two years since (March 15th, 1883) the *Journal* published a letter from Dr. G. L. Walton, written from Berlin, giving some details of experiments upon animals—rabbits, swine, dogs and cows—in resection of portions of lung. Dr. Black had previously read a paper before a meeting of the German Surgical Congress upon the subject, and when Dr. Walton met him he was exhibiting his results at Virchow's laboratory. These results upon animals had been quite successful, and though performed without very strict antiseptic precautions, and without resection of the ribs, had proved safe in most cases. The difference between such operations upon animals and upon man, upon healthy and upon diseased lungs, was dwelt upon by those present at Virchow's laboratory, but Dr. Black was very sanguine, and not long after operated upon the lung of a young woman, with a fatal result. The lung was found to have been healthy, a prosecution was instituted, and the operator committed suicide.

We are reminded of these occurrences by the receipt of an essay in French on the "Surgery of the Lung in non-traumatic Affections," by Dr. N. True, of Lyons. The writer considers his subject under the heads of pneumectomy (resection), pneumotomy (incision), and intra-pulmonary injections.

The only reported instances of resection of lung, beside Black's ill-fated case already referred to, are two by Kröulein of Zurich, upon tuberculous subjects, one of whom died nine days and the other a few hours after the operation; two by Ruggi, of Bologna, also upon tuberculous subjects, one apex in each case being affected, the first of which died on the ninth day of carbolic poisoning, and the second after thirty-six hours, the lung in this case having been closely adherent to the pleura; one case by Dr. Milton of Georgia, who, after resecting two carious ribs, removed two-thirds of one lobe of the right lung, for what affection is not stated, this patient lived four



months; Kröulein and Weinlechult have each removed portions of lung involved in tumors of the chest-wall, the former with a successful, the latter with a speedily fatal issue.

Bioudi gives the following *résumé* of his operations upon animals:

		Operations.	Success.
Extirpation of the right lung		23	12
“ “ left lung		34	18
“ “ both apices		3	3
“ “ middle lobe		1	1
“ “ lower lobe		1	1

Dr. True arrives at the judicious general conclusions in regard to pneumectomy that a partial or total resection, performed antiseptically, is generally supported by most animals and is compatible with life: that applied to man in the treatment of tuberculosis the operation has hitherto given deplorable results; that directed against secondary cancer, the affection of the lung being superficial and circumscribed it may be useful and less dangerous.

Pneumotomy, with and without drainage, a procedure of a very respectable antiquity, is considered as applied to (a) simple abscesses and bronchiectasies: (b) to tuberculous abscesses: (c) to pulmonary gangrene: (d) to hydatid cysts: (e) to foreign bodies. A large number of observations are cited under these various heads, and the general conclusions are reached that incision of the lung, for well determined cases deserves a recognized place in surgical practice, and may be regarded as advantageous (a) in certain abscesses of various origin entailing grave phenomena and whose topography is well established: (b) in circumscribed gangrene producing general infection the situation of which can be made out: (c) in putrid bronchitis when severe and localized: (d) in rare forms of limited tuberculosis accompanied by exhausting septic infection: (e) in hydatid cysts of large volume without spontaneous cure and resisting other methods: (f) in cases of intra-pulmonary foreign bodies not amenable to the usual manipulations and giving rise to inflammatory disturbances.

Exploratory punctures, when made carefully, are harmless and often give valuable indications for pneumotomy: pleural adhesions are not always indispensable, but are a favorable condition, and their absence in certain cases should be a formal contra-indication to interference; the lancet may be used, but the thermo-cautery, which is less dangerous, should be generally preferred; resection of the ribs ought to be more practised, especially with large pulmonary cavities, drainage and antiseptic washing out are always useful and often necessary.

In regard to intra-pulmonary injections, Dr. True concludes from his review of the literature of the subject, that antiseptic injections into cavities without pneumotomy do not promise well; injections into the pulmonary parenchyma are well borne both by man and animals if carefully administered with but slightly irritating liquids in moderate doses; intra-parenchymatous injections in tuberculous subjects neither aggravate the local condition nor arrest the course of the pulmonary lesions, and in some cases seem to have produced a slight amelioration of the symptoms; various regions of the chest wall may be traversed, but the sub-clavicular and the axillary are the safest and handiest.

#### ON THE SURGICAL TREATMENT OF ASTHMATIC CONDITIONS.

HACK, of Freiburg, speaking before the Medical Congress at Wiesbaden, communicated his experience of nearly six hundred cases of asthmatic conditions (*Beilage zum Centralb.*) In all these cases a reflex neurosis could be found, either present or having existed some time previous. The nose was invariably the centre of the reflex irritation. In eighty-one cases in which nasal obstruction alone called for surgical interference, it became evident that, with the increase of chronic hyperplastic rhinitis, all neurotic conditions, especially asthma, in spite of long existence, had disappeared spontaneously. Hack holds that reflex neuroses may originate whenever the nose

is the seat of hyperplastic conditions. In cases where the mucous membrane alone is affected, the usual catarrhal treatment with astringents and stimulants ordinarily suffices to suppress the neurosis, while neuroses is depending upon hyperplasia of the deeper cavernous structures invariably require surgical attendance—that is, destruction of the cavernous tissue.—*Kansas City Med. Record.*

#### HÆMOPTYSIS TREATED BY THE INDUCTION OF PNEUMOTHORAX SO AS TO COLLAPSE THE LUNG.

Dr. FRED'K C. SHATTUCK (*Boston Med. and Surg. Jour.*):

Dr. Cayley reports the case of a man of twenty-one years, a porter, admitted into the Middlesex Hospital for hæmoptysis; for some time past he had suffered from a slight cough but his health was otherwise very good, and the blood-spitting began only two days before admission. The feeble respiration, râles, and other signs detected in the left lung were attributed to the clogging of the organ with blood: the temperature was usually normal or subnormal in the morning, and rose to about 100° F. at night. For about three weeks the hæmorrhage persisted, and as life was evidently threatened by the loss of blood, it was decided after consultation to induce pneumothorax so as to cause collapse of the left lung and thus prevent the bleeding, which came probably from a pulmonary aneurysm or an ulcerated vessel. The operation was accordingly done and a tube was inserted: during the night following the operation the patient spat up blood twice, four ounces and two ounces, but there was no return of the hæmorrhage: the patient died suddenly, apparently from syncope, five days after the operation.

The autopsy showed that the case was one of acute miliary tuberculosis with one or two small cavities of older date, and the blood came from a branch of the pulmonary artery communicating with one of these cavities. The cavity containing the clot was smooth-walled, and showed no signs of any aneurysmal sac.

#### CIRCULATORY ORGANS.

##### ASPIRATION OF THE AORTA.

Mr. J. DACRE reports, in the *Bristol Medico-Chirurgical Journal*, "a case of sudden pulmonary congestion relieved by aspiration of the aorta," the aorta being aspirated by mistake instead of the right auricle. The patient was a man forty years of age, who had had some phthisical symptoms for a year. He was brought to the Bristol Infirmary suffering from a sudden and acute attack of pulmonary congestion and œdema. His symptoms were great lividity, cold extremities, a feeble, rapid pulse, and great dyspnoea. Loud gurgling râles were heard over the chest. His condition steadily grew worse until the patient became pulseless and apparently *in extremis*.

As there was apparently next to no systole of the heart, and no distention of superficial veins, it was determined to relieve the venous engorgement of the lungs and right side of the heart by tapping the right auricle itself.

Accordingly, a medium-sized needle and canula was inserted in the fourth intercostal space on the right side, close to the edge of the sternum, and passed straight through the intercostal tissue until it was felt to be in the chest; the point of the needle was then turned sharply inward under the sternum, and pushed in that direction for about an inch and a half, when it was felt to be in a cavity. On removing the needle, blood jetted from the canula and thirty ounces were withdrawn. For two hours the patient was more comfortable. He then began to sink again. Aspiration was repeated in four hours and sixteen ounces of blood drawn. This caused no relief, and the patient died about half an hour later. Post-mortem examination showed that the needle had passed immediately above the right auricular

appendix and pierced the anterior surface of the aorta about a fourth of an inch above one of the semilunar valves. There were two ounces of blood in the pericardium.

Cardicentesis is a novel procedure, and one of which little is yet known. So far, the operation has not established itself in any wise as one which will help when all other resources are exhausted. It appears, in fact, probable that phlebotomy is better and as efficient. Still, on the other hand, experience so far shows that cardiacentesis is not dangerous.

One practical point brought out, according to Mr. Dacre, is, that to reach the right auricle the needle should be inserted in the fourth intercostal space on the right side, near the sternum, and should be passed directly back.—*Medical Record.*

#### GANGRENE OF THE LEG DUE TO POPLITEAL EMBOLISM.

From the proceedings of the *Brooklyn Path. Soc.*—Dr. Leuf related the case of a German midwife, about thirty-five years old, who had had rheumatism at times for fourteen years, also frequent attacks of dyspnoea due to cardiac valvular disease. The attack of rheumatism which terminated her life began in the latter part of April, and presented inflammatory signs in both ankles. After some days' treatment the feet became better, and the physician had a pack of ice-water and salt applied to the left foot. This was continued under protest for upward of two hours and then removed. A few hours later the patient felt a sensation as of something darting down the left thigh, along the course of the femoral, and stopping with a sudden jar at the back of the knee. This sudden jar was a shock to her whole body, and caused the entire leg below the knee to feel as if suddenly electrified, and the leg had continued numb, with tingling sensations until two days later, when the foot was cold and swollen, with the plantar surface of a dark hue. The sensibility of the foot was impaired, and it could hardly be moved. The patient complained of severe pains in the toes and instep. Her pulse was very irregular and her heart feeble, with mitral stenotic and regurgitant murmurs well marked. Her face wore an anxious, expectant expression, and was of a leaden pallor. She had black hair and a dark complexion. Examination at the back of the knee revealed a rod-like body beneath the skin in the popliteal space, having a diameter of over 1 cm. This hardness extended almost the whole length of the popliteal space. The diagnosis was made at once of embolism of the popliteal artery. The case terminated as one of moist gangrene.

#### TRAUMATIC ANEURYSM OF THE THORACIC AORTA.

Hospital Report (Philadelphia) *Md. Med. Jour.*—The day before his admission a bale of carpet, weighing three hundred pounds, fell on this man's back and shoulders, severely straining his back and chest. He is sixty-four years old. On admission he complains of pain and soreness in the back and chest; this pain is aggravated by motion, though it is present even when he is quiet. During the night he has several movements from the bowels; his urinary apparatus is normal and there is no cough. He was ordered morphia to relieve the pain and a stimulating liniment for the strained muscles. His appetite is good and the next morning he feels somewhat easier. Later in the day he has a severe paroxysm of pain about and below the umbilicus. There is some tympanites, for which a carminative is given. At 10 P. M., when he had been lying quietly, he suddenly jumped out of bed, placed his hand on his heart, made an exclamation of pain, sank to the floor and in two minutes was dead. At the autopsy the heart was found slightly hypertrophied and the valves normal. The aorta was normal until below the arch. At the bottom of the descending portion of the arch there was an atheromatous spot, and just before this there was a transverse fissure on the outer side of the vessel, nearly half an inch long and extending

through the inner and middle coats. The adventitia had been dissected from the muscular coat for about the circumference of the vessel, for a distance for at least five inches below the diaphragm. At this point the artery was torn in dissection. There was no evidence of another opening admitting the blood to the aorta. About one inch below the opening in the intima and middle coats there was a large rent in the adventitia letting the blood into the pleural cavity. The conclusion was reached that we have had a ruptured dissecting aneurysm of the thoracic aorta.

### HÆMATOMA OF THE THIGH.

Dr. H. B. SANDS (*N. Y. Surg. Soc.*) presented a specimen obtained from the body of a man who died in June last in St. Luke's Hospital. The interest of the case lay in discovering, if possible, the seat of the lesion for which an operation was performed in the month of June, 1883. The case had been fully reported in the *Archives of Medicine* for December, 1884.

A man, fifty-one years of age, had suddenly developed in the left thigh a swelling of very large size. At first this was thought to be an aneurysm, but it lacked many of the features of an aneurysm, and Dr. Sands diagnosed a hæmatoma communicating with a vein. At the time of the operation seven pints of blood, by measurement, were evacuated from the tumor, and it was estimated that a pint of blood was lost; in other words, the tumor contained a gallon of blood. He found a large opening leading from the sac into what seemed to be one of the profunda veins, and tied the vessel in question above and below the bleeding point. The man recovered and regained the use of his limb. Two years later he died in St. Luke's Hospital of visceral diseases implicating chiefly the liver and kidneys. At the autopsy a segment of the affected limb was removed and submitted for examination to Dr. Hall, who had made the following report: (The report confirmed the opinion that the tumor was a venous tumor, not aneurysmal, caused by rupture of a profunda vein.—ED.)

### ALIMENTARY ORGANS.

#### HOW TO TREAT HÆMORRHOIDS BY INJECTIONS OF CARBOLIC ACID.

By CHARLES B. KELSEY, M.D., of New York.

From the *N. Y. Med. Jour.*, Nov., 1885.—The injection of hæmorrhoids with carbolic acid, though apparently a simple and trivial affair, is to be regarded in the light of a surgical operation, and should not be undertaken by the practitioner until he has surrounded himself and the patients with all the safeguards at his command.

There are two accidents which may happen in these cases, and for which the operator must be on his guard. One is undue ulceration, the other is abscess.

The objections to and possible complications of this method of treatment are easily enumerated. They are, 1, Pain; 2, vesical irritation where strong solutions are used; 3, marginal abscess; 4, deep cellulitis. In the majority of cases the patient will escape them all.

As far as I have been able to reduce this treatment to a matter of rule the results are as follows:

1. Use only the purest crystallized carbolic acid, the purest glycerin, and distilled water in the preparation of the solutions. Each, when prepared, should be perfectly colorless and clear, the acid being in perfect solution.

The glycerin is added to the solution of carbolic acid in water in just sufficient quantity to make a clear fluid, and the amount is not important. As soon as a solution begins to assume a yellowish tint it should be replaced by a fresh one.

2. Use only the finest and most perfect hypodermic needles and a perfectly working, clean syringe with side handles. After each injection when the syringe is put away, clean it thoroughly, to be ready for the next time.

3. The treatment may be applied to every variety of internal hæmorrhoids, no matter what their size. It is not applicable to external hæmorrhoids, either of the cutaneous or the vascular variety, both of which may be treated by better means.

4. Before making an application give an enema of hot water, and let the patient strain the tumors as much into view as possible. Then select the largest and deposit five drops of the solution as near the centre of the tumor as possible, taking care not to go too deep so as to perforate the wall of the rectum and inject the surrounding cellular tissue. The needle should be entered at the most prominent point of the tumor. If the hæmorrhoid does not protrude from the anus, a tenaculum may be used to draw it into view. After the injection has been made the parts should be replaced, and the patient kept under observation for a few minutes to see that there is no unusual pain. The injection will cause some immediate smarting if it is made near the verge of the anus; if made above the external sphincter, the patient may not feel the puncture or the injection for several minutes, when a sense of pressure and smarting will be appreciated. For the reason that it is impossible to tell absolutely what the effect of an injection is to be until at least twenty-four hours have passed, it is better to make but one at a visit and to wait till the full effect of each one is seen before making another. If on the second day there is no pain or soreness, another tumor may be attacked, and this will often be the case.

5. The strength of the solution must be regulated by the nature of the case, and in my own practice varies from five per cent. to pure crystallized acid. In a large, vascular, prolapsing tumor, which is well defined and somewhat pedunculated, five drops of pure acid may be used with the expectation of producing a circumscribed slough which will result in a radical cure. A thirty-three per cent. solution under the same conditions will probably produce consolidation and shrinkage with a slough, but the injections will have to be repeated several times. A small tumor which protrudes but slightly, is not pedunculated, and can be seen and felt as a mere prominence on the mucous membrane, may be cured by a single injection of a five per cent. solution, which will cause it to become hard and decidedly reduce its size, while an injection of a fifty per cent. solution might make considerable trouble, the remedy being too powerful for the disease. There is no arbitrary rule which can be applied to every case. As in any other surgical operation, some cases will be more satisfactory than others, and an occasional accident must be expected; but, on the whole, it seems to be the best method of treatment yet devised.

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#### INDUCED TEMPORARY PARALYSIS OF THE SPHINCTER ANI MUSCLES, AS AN AID TO OPERATIONS FOR HEMORRHOIDS AND ULCERS OF THE RECTUM..

By S. W. CALDWELL, M.D., Trenton, Tenn.

From the *Miss. Valley Med. Monthly*.—Something less than a year ago, treating a case of anal fissure by dilatation or divulsion, on removing the thumbs the anus was open, patulous, the lower margin was pendant, like a redundant under lip, and there lying in full view without my touching the parts was a hemorrhoidal tumor about the size of a medium hazel nut, and situated an inch above the internal sphincter, and as easily injected as if it had been on the surface. That made a decided impression upon my mind, for it had been but a few days since I had had a great deal of trouble to

reach and inject just such a hemorrhoid because of that same sphincter muscle, and just by paralyzing that muscle I had only to take hold of it with a forceps to steady it and inject. And though I have had not exceeding half a dozen cases, the results have been so superior to former methods that I call your attention to it that you may test it. You will find that facility of operating is not all there is to commend, the procedure of which will be developed further on.

The preparatory treatment does not differ from other modes of operating, but anæsthesia is most important because it is a very painful operation, and without some protection the stoutest will be considerably shocked, and because the relaxation from the anæsthesia will materially influence for good.

To do the operation, place your patient on the side, and that side too on which the tumor, ulcer, etc., is; if it is posterior then place him on his back; if anterior you will have to operate with the patient on the side. With the thumbs well oiled pass them one at a time into the rectum. When in position the thumbs should be back to back. Now separate the thumbs with such force as to break some of the muscular fibres which you feel when it occurs, and on removing the thumbs the anus will or should present the appearance described above. The sphincters being out of the way, so to speak, you proceed to do such operation as the case demands. If you should have to use the speculum you will find it much easier done.

And what, may be asked, are the advantages of the procedure? I answer, first of all, as has been intimated, the putting out of the way that irritable, stubborn, resisting sphincter and muscle, converting a rather difficult, complicated, into a simple, easily performed operation. By the induced paralysis you obtain that condition of the parts so conducive to a favorable result—REST—thus preventing almost entirely that most painful spasmodic contraction of the anus following nearly all manipulations of these irritable parts; and by the same, lessen vesical tenesmus, all of which, combined, give us earlier restoration to health.

It was Racemeir, a European surgeon, who, I believe, first practiced dilatation or divulsion for the cure of anal fissure, but Prof. Van Buren introduced it to the profession of this country, and I saw him practice it frequently in Bellevue Hospital in 1868-9, but I have nowhere seen it used to paralyze the sphincter muscles to facilitate operations for hemorrhoids and ulcers. It will destroy hemorrhoids situated along the sphincter muscles, and is, in some cases, superior to the knife for fissure.

#### THE OPERATIVE TREATMENT OF INTESTINAL OBSTRUCTION.

From the *Kansas City Medical Record* (Editorial).—Mr. TREVES, British Medical Association, in his paper, refers only to the acute intestinal obstructions, which he claims are due to three conditions: (1) Hernia-like strangulation of the gut; (2) volvulus of the sigmoid flexure, and (3) acute invagination. In describing the first form of obstruction, he says: "In every instance, a knuckle or loop of bowel is held and kept in bondage until it is strangulated. The mechanism of the obstruction is in all main points identical with that of strangulated external hernia; the general pathology is the same, and, with some minor modifications, the symptoms are the same."

The following treatment is employed by Mr. Treves: The patient is put to bed and kept absolutely quiet; warm applications are put to the abdomen to relieve pain, opium given to procure rest to the bowel, and food is entirely interdicted. Hot tea or ice is given to quench thirst. The colon is emptied by enemata. If the diagnosis be clear, he urges operative procedure by way of laparotomy within the first twenty-four hours. He repeats the common assertion that laparotomy is not dangerous in itself, but only when employed as a *dernier ressort*. He condemns the administration of metallic mercury, and the enemata of depressing or relaxing remedies.

In regard to the treatment of acute volvulus of the sigmoid flexure, Mr. Treves says: "I take it that, in the first instance, the treatment by rest and starvation would be insisted on as a matter of routine. Opium would be administered, and it may be as well to empty the rectum by an enema. With regard to more active interference, I believe that all attempts at relief

by enemata or rectal tubes are likely to prove not only quite useless, but actually harmful. If the precise relation of the parts be borne in mind, it will be perceived that a forcible injection will tend to tighten rather than to relax the twist." He says that simple laparotomy in these cases is of little or no use, promising no relief. He prefers to cut down in median line, puncture the gut, and try to reduce the twist. This failing, he opens the bowel at the summit of the flexure, unfolds it, and establishes an artificial anus.

In acute intussusception he advises twelve hours' treatment with opium or belladonna and starvation and perfect quiet, after which reduction may be attempted by means of in-ufflation or forcible enemata. In children the injection should be given cautiously, while the child is under an anæsthetic. Gentle kneading is useful.

Dr. Robson, in his paper read at the same meeting, agrees in a measure with Mr. Treves. His paper, however, refers more particularly to chronic cases, which he hopes to cure by medical treatment, such as injections, massage, galvanism, etc. Should these remedies fail, colotomy or laparotomy is plainly indicated.

Mr. J. G. Smith, who read a third paper, speaks chiefly of two points in operations, in which he does not agree with Mr. Treves. He says the best guide to seat of operation is visual examination, assisted by extrusion of bowel. He is utterly opposed to the attempt to diagnosticate with the hand alone. He would rather use the finger than the hand, and would prefer the sight of both. He is opposed to median laparotomy for obstruction in the colon, because it will have to be, as a rule, supplemented by a lumbar incision. He has no hesitation in allowing the bowels to extrude in making an examination, preferring it to groping for the cause. He is much in favor of enterotomy or enterostomy, and believes it applicable in nearly every form of intestinal obstruction. The stomach-pump will greatly relieve the intestines of their fluids and gaseous contents, giving the patient comfort and sometimes effecting a cure.

Although these papers are very instructive, neither of them touch upon a very important point in connection with acute intestinal obstruction; we refer to cases of hernial protrusions which are reducible. In these cases the hernia may have been reduced repeatedly for years, with little or no difficulty; but finally, after apparent reduction, the symptoms of strangulation still continue. In this event the surgeon should apprehend the continuance of the obstruction, and proceed to operate without delay. We have known of several cases of this kind where the hernia had been reduced in block. The post-mortem revealed the presence of the strangulation in the abdominal cavity; a small knuckle of intestine having been caught in the abdominal fascia or in the peritonæum. This inflammatory action during a severe, long-continued strangulation may even result in a strangulation after reduction. Several cases have recently been reported where this kind of obstruction has occurred. Dr. Guibor, of Kansas, reported a case at the last annual meeting of the State Society, in which a hernia supposed to be reduced had been held by a small knuckle in the transversalis fascia. More recently a similar case occurred in the practice of Dr. D. R. Porter, of Kansas City. In this case the hernia was of long standing and had many times been strangulated and reduced; finally, however, the symptoms were not relieved after a supposed reduction. An operation was suggested and performed by Dr. Halley. A small knuckle of intestine was found invaginated in the peritonæum. Timely operative interference in this case saved the life of the patient. The slight risk in opening the abdominal cavity should always warrant the operation when symptoms of obstruction are prominent.

#### THE RADICAL CURE OF HERNIA.

*Canada Lancet*, Oct., 1885 (Editorial).—The operation for radical cure of hernia is not performed in this country nearly as often as is demanded. We can see no reason why a simple, reducible hernia should not be operated upon

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for radical cure in all cases, and more especially in children and persons under middle age. It is eminently more rational to perform the operation with a slight risk than to have our patients pass through life constantly wearing a cumbersome truss, or with the troublesome annoyance of a scrotal hernia, which is almost certain to increase in size gradually.

The English surgeons, of late years, are performing the operation for radical cure with impunity; we are doing it, as a rule, only when the operation is forced upon us as the only relief for strangulated, irreducible hernia. Under these conditions the operation is demanded, but in many cases is postponed until inflammation has supervened, either through rough manipulation, or severe strangulation long continued. We will venture the assertion that more deaths have been caused by strangulated hernia than would have occurred from the operation for the radical cure. Those who have hernia are never free from danger of strangulation, and hence their lives are constantly in jeopardy from this cause.

The time is in the near future when this operation will be the rule in properly selected cases. There have been, and probably always will be, some failures, and a few deaths, but such, as shown by statistics in England, are extremely few, and can offer no comparison to the relief afforded.

#### STRICTURE OF THE ŒSOPHAGUS; INTERNAL ŒSOPHAGOTOMY.

Dr. H. B. SANDS (Proceedings of the N. Y. Surg. Soc., published Nov. 1885,) presented a woman, twenty-one years of age, who had come under his observation one year ago last June. She was sent by Dr. Paddock, of Dalton, Mass., on account of a stricture of the œsophagus, which was the result of the accidental swallowing of a solution of caustic potash when she was two years old. Dr. Paddock stated that he had been called to see the patient on account of dysphagia, and that she was unable to swallow solid food, and was badly nourished. He detected a close stricture through which he could pass only the smallest bougies. When she came to Dr. Sands he was able to confirm the diagnosis made by Dr. Paddock, and found a stricture situated seven inches from the incisor teeth, through which he could introduce a French catheter, No. 12. He endeavored to dilate the stricture, and succeeded in carrying the dilatation up to No. 23 French, but was unable to accomplish more. Therefore, on the 9th of July, 1884, he introduced the œsophagotome which he had already shown to the society, passed the bulb beyond the stricture, projected the blade 2.5 mm., and then withdrew it, making an incision in the posterior median line of the œsophagus. Immediately after the operation, which was performed without an anæsthetic and was attended by no hæmorrhage, he passed a No. 29 (French) bougie. Subsequently he carried the dilatation up to No. 34 (French). After the cutting operation, instruments were at first passed every second or third day, and during the summer and autumn at intervals of three weeks. In December the interval between the introductions of the bougies was increased to one month, after the 1st of January to two months, and now there had been an interval of three months, without any diminution in the caliber of the œsophagus at the point where it had been divided. Soon after the operation, exploration of the œsophagus revealed the presence of another stricture, ten inches from the incisor teeth, which admitted a No. 24 (French). Dr. Sands dilated this stricture, and carried the dilatation up to No. 29, but beyond this he had been unable to dilate it. He then demonstrated the lower stricture, and showed that the upper stricture allowed a bougie No. 34 to pass, while the lower one arrested instruments larger than No. 29.

The reason why he presented the patient was because he thought it desirable to correct the common impression that all strictures of the œsophagus exhibited an invincible tendency to recontraction, and that the operation of internal division was unsatisfactory because it was not likely to produce any permanent good result.



## THE TREATMENT OF RECTAL CANCER.

Mr. HARRISON CRIPPS (*The Therapeutic Gazette*).—Apart from the exceptional cases in which the growth is limited, and not far from the anus, and the common run of cases in which the disease is undoubtedly too extensive for removal, there will remain a certain number of instances in which difference of opinion will legitimately exist as to the desirability of excision. For such cases, it is impracticable to lay down any arbitrary rules apart from the consideration of the special features in any particular instance; but, speaking generally, the following features will serve as a reliable guide: (1) the height of the disease; (2) its position; (3) the implication of neighboring structures; (4) the general constitutional condition of the patient.

1. *The Height of the Disease*.—If, after a thorough examination, under an anæsthetic if necessary, the finger cannot be passed beyond the growth, an operation should not be undertaken, unless the growth be confined to the posterior wall, as mentioned in the next paragraph. Four inches is the limit that can be explored by the finger. It cannot be said that it is impossible to remove a greater extent of bowel; but, when once beyond the reach of the finger, it is impossible to know accurately how high the disease extends, or what connections it has formed; so that, after an operation of great danger and severity, it would be very doubtful whether the disease had been removed.

2. *The Position of the Disease*.—When situated wholly on the posterior wall, the growth can be removed at a somewhat greater height than when surrounding the bowel or situated anteriorly. If, on examination, the front wall seem free, and the finger can feel the growth posteriorly, though unable to get beyond its upper border, it would be advisable at least to make a posterior linear incision, with a view to a further exploration, and removal, if possible.

3. *The Implication of Neighboring Structures*.—If, when the finger is passed beyond the disease, the bowel show some movement on the neighboring structures, it generally means that the growth has not extended beyond the rectal walls, and that the case is suitable for removal. On the other hand, if, on digital examination, the bowel feel hard, rigid, and firmly bound to the surrounding organs, the case is an unfavorable one for operation. The rigidity and fixity of the bowel almost certainly imply an infiltration of cancer into the neighboring tissues, so that removal of the rectum does not mean the removal of the disease. The adhesion which is not uncommonly found between the disease and the lower part of the vagina does not, however, prevent an operation, for the mucous membrane on the posterior wall of the vagina can generally be peeled off the subjacent growth. In the male, it is much more difficult and unsatisfactory effectually to remove the growth when it invades the prostate.

4. *The General Constitutional Condition of the Patient*.—Care should be taken to examine the abdominal viscera; for although secondary deposits, when slight, cannot be detected, occasionally, even when the local disease is small, secondary deposits in the liver may be suspected, in which circumstances no operation should be performed. Age is no necessary bar to the operation; nevertheless, if the local conditions be only doubtfully favorable, it would be right to give a young patient a chance of an operation, which in an older person would be scarcely justifiable.

Taking all cases of rectal cancer at the time when they come under the surgeon's observation, it will be found that those which fulfil the conditions for successful extirpation are exceptional, and it will be only in a comparatively small number of cases that this operation can be recommended. That the operation in well-selected instances is of the utmost benefit admits of no question.

A considerable period of fair health may be enjoyed before recurrence takes place, and it is quite possible that a permanent cure may be occasionally effected, just as sometimes occurs after the removal of cancer from other parts.

*Colotomy*.—If it have been decided that the case is one unsuitable for excision, the next question arising is as to the propriety of colotomy. Some sur-

geons have recommended that this operation should be performed in all cases of rectal cancer unsuitable for excision. The operation is often one of the greatest service, but it is not so in every case, or irrespectively of the stage to which the disease has advanced.

When the symptoms of stricture become prominent, Mr. Cripps advises colotomy without delay. By waiting, the patient is deprived of the advantages of the operation, or it may have to be undertaken when the strength is so exhausted that a comparatively safe operation becomes one of considerable danger. The benefit afforded is often very great. Patients who have been harassed for months with symptoms of stricture are at once relieved of their most distressing trouble, and the closing months of life are passed in comparative rest.—*British Med. Jour.*

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## URINARY AND GENERATIVE ORGANS.

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### THE TREATMENT OF FUNCTIONAL IMPOTENCE.

Vienna Correspondent (*Medical Record*).—Psychical impotence, and impotence due to too early ejaculation of the seminal fluid, are the two forms which present themselves most frequently, and also the two which yield most readily to the proper treatment. They occur usually in strong, healthy young men, who are otherwise in normal health.

According to Dr. Ultzman, internal remedies, with the exception of iron and quinine, which are used as tonics, are completely useless, and do more harm than good. The treatment should be always principally local. The disturbance is a functional one, and consists in the incapability of having a normal erection. Since the capacity of exciting erections resides in the prostate, this is the point to which the therapy is to be directed. This is of several varieties; the simplest of all is the sound treatment; beginning with No. 20 French, and continued up to No. 30 French, are introduced daily into the bladder, the patient being in the horizontal position, that being the only proper position in passing urethral instruments. At each insertion the sound is left in from five to ten minutes. It is found to be of benefit after the sound is in the bladder to slightly depress the handle, in order to increase the pressure and distension in the prostatic urethra. By this method the metallic pressure alone acts upon the prostate, and usually in a few days powerful erections are excited. In some cases even after a few minutes, while the sound is still in the urethra, normal erections have taken place.

Another method of treatment is with the use of the cool sound. This is a thick metal catheter, closed at the vesical end and divided into two compartments by a partition running the entire length of the catheter. These two compartments open into each other at the vesical end. At the upper end they form two separate tubes, to which are attached rubber tubes, one carrying the water to the catheter down one side and back the other, and to an empty vessel by means of the second rubber tube, thus having a continuous flow through the catheter, the water coming from a vessel at a slightly higher level than the patient. In this case both the pressure of the catheter (or rather double tubular sound) and the temperature of the water act at the same time upon the prostate. The sound is passed as before until it is into the bladder, daily, but left in a somewhat longer time.

The temperature of the water is usually from 55° to 60° F. Some patients have a urethra which will not bear this temperature; in that case it can be raised 70° to 75° F. In some cases warm water is of value. It is especially to be tried where no result is observed from the use of cold.

Water of a temperature of 100° F., or above, can be used. This, in some cases, has effected a very rapid cure. The thermometric excitation of the prostatic urethra by means of the cool sound Dr. Ultzman has found of remarkable service.

The use of astringents upon the prostatic portion is a third method of treatment. Small suppositories are carried in and applied exactly at this location by means of the *porté rémède*. Tannin is commonly used, and is a good remedy. Urine is not to be passed for half an hour after the insertion. These are to be inserted every day, and continued not less than once in two days until normal erections are excited.

Still another method consists in dropping three or four drops of a five-per-cent. solution of sil. nit., by means of the deep urethral dropper-syringe of Ultzman, upon the prostatic urethra. This remedy is applied once in three or four days. In impotence with premature ejaculation the above remedies are of special value as auxiliary means to the usual treatment of quinine, iron, cold baths, change of climate, etc.

#### TREATMENT OF VARICOCELE.

Dr. W. H. PANCOAST, of Philadelphia (*Med. News*), reports a method which he has now successfully practised in over four hundred cases since the year 1856. It is very simple, and therefore, in marked contrast to that so much in vogue in New York, and advocated particularly by Dr. Henry, which involves the cutting away of a portion of the scrotum. He did not think the latter a philosophical procedure, because it simply shortens the bag in which the enlarged veins are contained, and this can be more efficiently done by suspending them in a muslin bag, because the latter is indistensible, while the shortened scrotum, consisting of elastic tissues, gradually stretches more and more, so that the trouble eventually returns. This procedure does not, therefore, go to the root of the evil. Still more complicated and serious is the operation described by Mr. Lee, in the *Lancet* of April 18, 1885, in which he cuts open the scrotum and lifts out the veins of the spermatic cord. In both these operations there is no little danger of erysipelas setting in. In his own operation the patient is cured in three or four days, instead of as many weeks. It consists of transfixing the scrotum with a sail-maker's needle (which has a good point, but no sharp edges), and passing between the vas deferens and the veins a strong silk ligature, which, having been carried around the veins, is then brought out at the point of insertion. The ends of the ligature are then tightly secured over a button of German silver or zinc, and the veins being thus strangulated, the ulcerative process goes on rapidly. In stricture of the urethra he has never yet failed to get into the bladder with the instrument which he had modelled after that of Mr. Syme. After passing the filiform bougie through the staff, the latter is pushed up to the point of stricture, which is then cut superficially at a variety of points. The urethrotome is so constructed that the knife can be made to cut as deeply or as superficially as desired. Afterward steady and progressive dilatation is to be regularly practised, and this, he insisted, is the only method of successfully treating stricture. Dr. Pancoast also exhibited and explained the *modus operandi* of a very light catheter bougie, with olive-shaped extremity, which he has devised.

Dr. J. W. S. GOULEY, of New York, spoke of urethral stricture, and said that he was not in favor of multiple incisions. Only a scarification is possible with the instrument which Dr. Pancoast had exhibited, and in his experience scarification had proved valueless. It was his opinion that the correct method of performing internal urethrotomy is to make one deep incision, so as to have but one cicatrix, and to make it in the floor of the urethra. This allows nature to put in what he termed her splice of cicatricial tissue, and the operation of urethrotomy is only the beginning of the treatment of the stricture, since no stricture is cured by incision alone. This plasmatic material becomes slowly organized, and then dilatation is to be commenced. This is to be kept up not for months, but for years. As to metallic catheters, it is not once in five hundred times that he ever has any occasion to use one. If he does resort to a metallic instrument, however, he wants it very heavy, so that it will make its way into the bladder itself, and not of the light character of Dr. Pancoast's, with which he thought an inexperienced hand could

do much harm. He objected to the olive-shaped extremity (which may be convenient in a soft instrument), on the ground that it is liable to make false routes, because it is three or four sizes smaller than the diameter of the shaft. Another objection to the instrument (which, however, is one that applies to a very large number of catheters) is that it has two eyes. One eye causes quite sufficient irritation, and there is no use whatever in having two.

Dr. Pancoast said that in his urethrotome the knife is so arranged to cut just as deeply or superficially as the operator desires. For himself, he prefers a number of small cicatrices to one large one. He agreed with Dr. Gouley, that steady dilatation is absolutely essential for a cure, and that the cutting of the stricture is only the first stage in the process. In regard to his catheter-bougie, it is not true that the olive-shaped extremity pushes its way along the urethra. On the contrary, it has to be pushed in, and the main shaft of the instrument, which made its way along the urethra, always keeps its path in the centre of the canal.

### PHYTOLACCA DECANDRA IN ORCHITIS.

By W. O'DANIEL, M.D., Bullard's, Ga.

No doubt most physicians have experienced trouble and anxiety in giving patients, suffering from inflammation of the testicle, no matter whether gonorrhoea or not, the expected speedy relief. For several years past I have adopted the following plan of treatment: If there is much inflammation and swelling of the affected parts, I usually have the patient to stand on his feet, which increases the already turgescient condition of the scrotal veins, when I puncture them, thereby relieving, to some extent, the abnormal congestion by the free escape of blood from the distended veins.

After which I advise patient to remain in bed and take from four to six drops of the fluid extract of *phytolacca decandra* every three or four hours, until the specific effect of the drug is at least partially bad. I then lessen the dose or lengthen the interval, according to circumstances. This, with an ointment of belladonna and *phytolacca*, applied to the swollen and inflamed parts, with an anodyne, if necessary, to relieve pain and promote rest, and a well-fitting suspensory bandage after convalescence, constitutes the most satisfactory treatment known to me.—*Atlanta Med. and Surg. Jour.*

### HYDROCELE IN THE MALE.

Dr. FRED. S. DENNIS, of New York, Surg. to Bellevue Hospital (*Virginia Med. Monthly*) publishes a lecture in which he argues in favor of always trying the palliative treatment by paracentesis first, on the ground not only of occasional inconvenient results from the radical operation, but of the frequency of cure after simple tapping. Dr. Dennis has seen many cases permanently cured by this procedure. In the first series of 100 cases operated on by Dr. Dennis, he was surprised to find 25 per cent. cured by simple tapping. Another point of interest in Dr. Dennis' paper is that he shows, on the good authority of Professor Welch, that in some hydroceles the fluid contains, in addition to albumin and cholesterine, indigo-blue. This is a new observation by Dr. Welch. The indigo-blue is supposed to be produced by the decomposition of indican. Dr. Dennis' favorite operation for radical cure is the excision of a piece of the sac, or simple incision into the sac, evacuation of the contents, and stitching the tunica vaginalis and skin together, "under strict antiseptic precautions."

## THE SURGERY OF THE KIDNEY.

By LAWSON TAIT, F.R.C.S., Birmingham, Eng.

From the *Canada Lancet*, October, 1885.—The surgery of the kidney has now advanced to such a stage that we may speak pretty positively of what can, and what ought to be done in all cases of tumors of this organ. What I have to say now is very much a repetition of what I have said in previous papers on this subject, with the exception that I have had, as I have already indicated to modify somewhat my belief concerning movable kidneys; but even here I can confirm much of what I have already said on the question. This abnormality is so rare that this is the first case I have ever seen in a practice which now extends over twenty-five years and which includes forty operations upon the kidney and more than twelve hundred abdominals. The second point deserving notice is, that all of these forty operations, with one exception, have been performed upon the right kidney, a circumstance which certainly is very remarkable and must be something more than a mere coincidence. Out of my forty operations on diseased kidneys, including abscesses, hydatids, sarcomas, and stones in the pelvis, I not only had thirty-eight recoveries, but I have had—so far as I know up to the time of writing—complete cures in thirty-eight out of the forty operations. In the fortieth case I failed, because I did too much; I removed a kidney with a large number of chronic abscesses in it, when I ought simply to have opened it and drained it, as an expedient preparatory to its subsequent removal. This patient died of shock, and in this I learned the lesson, which I shall always follow in future in such cases, of opening the kidney, in order to ascertain its condition exactly before I remove it. I really think that, in this conclusion, I have to sum up all my experience in renal surgery.

There can be no question that interference with the large malignant tumors, which we see in children under 14 and 15 years of age, is simply nonsense. Even if the little sufferers recover from the terrible operation which is performed in such a case, the disease will recur, and no good will have been done. But in all other tumors of the kidney, if the patient is sufficiently ill to justify interference, the disease may be attacked with a perfect certainty of procuring relief in every case and complete cure in probably 90 per cent. I do not think it matters much whether the organ be attacked by what is called the abdominal method, or the lumbar, as far as the immediate success of the operation is concerned. But I have a strong preference in my own practice for the abdominal method, if there is any likelihood of its being decided to remove the kidney, for in this way the condition of the other organ may be ascertained before the diseased one is removed. If, however, it has been determined to perform nephrotomy, and the removal of the diseased organ is a question which has been dismissed, then I think the lumbar incision may be the preferable of the two. In such a case the operation of nephrotomy is an extremely easy one, and even the removal of the kidney is not a proceeding accompanied by much danger or difficulty, unless it has been too long delayed.

## GONORRHEA A GERM DISEASE.

From *Medical News* (Editorial).—The dependence of gonorrhœa upon specific germs is being more clearly shown, and is receiving more general professional acceptance. Martineau asserts in the *Archives de Tocologie*, for September, that the gonococcus is absolutely characteristic of gonorrhœal inflammations, as all recent investigations demonstrate.

Bumm, of Wurtzburg, has recently published a work upon microörganism of gonorrhœal diseases of mucous membranes, an analysis of which is given in a recent number of the *Centralblatt für Gynäkologie*.

Bumm states that gonorrhœal bacteria, in contradistinction to all other forms, may enter the cell protoplasm, there reproduce, and form a round mass about nucleus.

In all gonorrhœal inflammations gonococci can be found, provided no disinfectant treatment has been used previous to the examination. Secretions

free from gonococci will not produce infection of a mucous membrane, while those containing even a minute number cause gonorrhœal inflammation.

Bumm succeeded in getting a pure culture of gonococci from a gonorrhœal conjunctival secretion, and inoculating the urethral mucous membrane of a woman with this culture caused typical gonorrhœal urethritis.

Martineau states in his *Leçons Cliniques sur la Blenorragie chez la Femme*, that the micrococcus of gonorrhœa has been constantly found in gonorrhœal pus whether the disease affect the urethra, the vagina, the conjunctiva, the uterus, the vulva, the urethral or the periurethral follicles, or Bartholin's glands. "It is beyond doubt," he asserts, that "gonorrhœa is a venereal affection, virulent and contagious, *sui generis*, having its own individuality, and that it can only be reproduced by an infectious agent always the same.

### GONORRHEAL EPIDIDYMITIS.

Dr. JOHN H. BRINTON (*Phil. Med. Times*).—I brought a man before you at our last clinic suffering with gonorrhœal orchitis, and then told you that the term orchitis was not to be taken in the strict sense as inflammation of the testicle, for in many cases the epididymis only is involved. I now present to you James F., 26 years of age, with an enlarged testicle following an attack of gonorrhœa, who has epididymitis, not orchitis. This is very likely to occur in cases of gonorrhœa, and you find upon examining the testicle in such cases that the swelling is at first confined to the epididymis, involving the globus major or minor, or both, and you will detect a crescentic mass of induration (due to the inflamed epididymis) and in the cup-shaped depression rests the testicle. Subsequently the testicle may become inflamed, or an effusion occur into the tunica vaginalis, giving rise to great pain and hardness.

It is a fact worth noting that the pain is not necessarily felt in the testicle. This man complains of pain in his back, in the groin along the spermatic cord, and extending along the branches of the genito-crural nerve, down the thigh, even down to the leg, rather than in the testicle itself.

How shall you treat this affection? If a case of acute epididymitis come to you for treatment, you should direct the patient to lie down upon his back with the scrotum elevated, so as to drain the venous blood away; and cold applications of lead-water and laudanum may be made to the inflamed organ,—or they may be tepid if the patient cannot bear the cold. If the bowels are not open, give the man a dose of salts, Epsom or Rochelle, a teaspoonful each morning. If the pains are severe, opium may also be given; and if the inflammation is very marked, two or three ounces of blood may be taken by leeches. I know that it is said that leeches should not be applied to the scrotum, on account of the ecchymosis which they cause; but in such cases looks are of less importance than prompt relief. The lead-water will have to be washed off before the leeches will take hold. After the acute symptoms have passed, I am in the habit of applying mercurial ointment upon a piece of lint, with which the extract of belladonna may be incorporated in proportions up to one-half that of the mercury. This is to be applied fresh every morning; before doing which the scrotum is to be carefully washed off with warm water and soap, to get off the old ointment. Under this treatment the patient will usually get well in about two weeks, but there will generally remain a tell tale button of induration in the globus minor. When you find this significant little witness, you need not test the patient's veracity too greatly by asking if he ever had gonorrhœa and an inflamed testicle.

The treatment of epididymitis, then, may be summed up as rest, support for the testicle, saline purgatives, leeches, and anodyne applications of lead-water and laudanum, with morphia internally if necessary. The diet should be restricted.

## SYPHILITIC AFFECTIONS.

## HARD CHANCRE OF THE TONSIL.

By FRANK DONALDSON, Jr., M.D., Chief of Clinic for Throat and Chest, University of Maryland.

From the *Medical News*.—Theoretically, tonsil chancre should be more common among women than among men, and Morell Mackenzie's experience confirms this idea, for out of the seven cases seen by him, six were in women. Rollet also found chancre of the mouth more common among women, and Ricord, in five years, saw one mouth chancre in 389 men, and two in 199 women.

In young children, chancres of the mouth often arise from taking the milk from the breast of a syphilitic woman, and Wigglesworth tells of a medical student who put his mouth to that of an asphyxiated newly-born child and inflated the lungs several times. One month later a hard chancre developed on his right tonsil. Knight, too, tells of a lady who contracted a chancre of the tonsil by using the same tooth-powder as her nephew, who was suffering from secondary syphilis. Again, the contagion is carried from one person to another by means of instruments, by knives, forks, glasses, and other household utensils used by more than one person; by nursing bottles (see case by Spillman), by cigar stumps, etc.

But of all the non-venereal causes of chancre of the tonsil, one of the most curious methods of infection is through the tube used by glass-blowers. Rollet, in 1858, was the first to call attention to this mode of contagion, having observed the epidemic at Rive-de-Giers.

The objective and subjective symptoms of chancre of the tonsil vary so greatly, and its situation is so remote that it often passes unobserved, and when seen is not diagnosed. In this connection Taylor remarks "that there is little doubt that some cases of the *syphilis d'emblée* or *larvée* of the French were really instances of tonsillar infection." Primary chancre of the tonsil, when situated in the pharynx, is most always found upon one of the tonsils, owing, no doubt, to the structure of these glands, the lacunæ of which are prone to receive and retain the syphilitic virus. Tonsil chancre is usually unilateral, Rizat, however, saw a young woman who had seven chancres in various places, with one on each tonsil, and Rollet also one with a hard chancre on each tonsil.

Tonsil chancre generally begins with slight redness and swelling, without perceptible induration of the gland. A most important sign is the hypertrophy and general tumefaction of the tonsil gland itself, and the adenopathy on the affected side, which would seem to be constant accompaniments of tonsil chancre.

The second important sign is the superficial erosion, increasing to an active ulcerating surface, covered usually with a grayish-white coating, thicker or thinner as the case may be.

The third and most important sign of hard chancre here, as elsewhere, viz., induration of its base, is always present, though not always in the same degree, the amount of induration depending on the amount of hypertrophy of the gland before the development of the chancre.

The next important sign is the well-marked and early submaxillary adenopathy on the affected side.

Diday thought the duration of tonsil chancre shorter than that of the primary sore in other places.

The functional symptoms of hard chancre of the tonsil are generally slight, and often an outbreak of roseola is the first intimation the patient has of his trouble.

There is generally, however, pain on deglutition. According to Rollet, among chancres of the mouth, those behind the anterior pillar are the most painful. It is in cases of phagedenic ulceration that the pain is greatest, and swallowing becomes impossible, the breath very fetid, and the patient extremely prostrate.

It would seem that a diagnosis between chancre and epithelioma in a case where there is considerable tonsillar hypertrophy, with an ulcer covered by a granular deposit, and where there is a negative history and the old patient, is by no means easy. An interesting case of this kind is given by Merklen. The patient was a man, æt 64, who had been suffering for two months with a tumor on the left side in the parotid region.

There followed an outbreak of secondary symptoms, which, with the ulcer in the tonsil, rapidly improved under antisyphilitic treatment.

Cases may arise then, where the diagnosis is difficult, and as it is a point neglected by the author in a paper on epithelioma of the tonsil, he is glad to take this opportunity to give the principal signs and symptoms of these two diseases:

#### SYPHILIS.

##### *Functional Symptoms.*

Deglutition and swallowing painful, but rarely impossible, with freedom from pain when the parts are at rest.

##### *Physical Signs.*

Some hypertrophy with early superficial ulceration in primary sore. The tertiary ulcer perforating and cone-shaped. Comparatively slight glandular enlargement, not painful, and subsides with the cause of the irritation.

Hemorrhage rare.

Slight emaciation.

Amenable to treatment.

#### CANCER.

##### *Functional Symptoms.*

Difficulty and pain in swallowing the first and constant symptom, increasing until it is impossible to take food. Lancinating pain referred to the ear.

##### *Physical Signs.*

Great hypertrophy, later widespread ulceration. Considerable glandular enlargement and induration, which become very painful, and do not disappear.

Hemorrhage frequent.

Great emaciation.

Not cured by any treatment.

Tonsil chancre may, under some circumstances, be taken for a mucous patch, whose favorite seat would seem to be upon the surface of the tonsil; and this is more likely to happen when the patient is seen for the first time, and secondary symptoms have already manifested themselves, and an ulcer still remains upon the tonsil; or when there is hypertrophy of the tonsil, with an active, and by no means superficial, ulceration of the mucous patch. The mucous patch, however, always follows the roseola; and the patch is, as a rule, superficial and of characteristic appearance, etc. To determine finally between a chancre and a mucous patch upon the tonsil, Diday says: "Cauterize the ulcer twice at an interval of five days, and, if it is a secondary ulcer, it will disappear; if a primary, hard chancre, it will not."

In exceptional cases chancre of the tonsil is complicated by an extensive slough.

The limitation of the ecchymotic spots, and the absence of its propagation to the pharynx, palate, and larynx, and the general course of the affection, with the appearance or non-appearance of secondary eruption, will settle the diagnosis.

If the lesion upon the tonsil has been of slow, unilateral development, is superficial, with grayish-white deposit; if there is a history, or even suspicion of syphilitic exposure; if there is glandular enlargement; if the sore on the tonsil appeared from fifteen days to three weeks after exposure, and there is absence of chancre elsewhere; if the patient has not been subject to simple tonsillar angina; if the pain is on the affected side, has lasted for some days or weeks, and has not excited febrile reaction, and the whole is followed in due time by an outbreak of secondary symptoms, certainly we are justified in a diagnosis of chancre of the tonsil.



## THE RADICAL TREATMENT OF SYPHILIS.

By W. A. HARDAWAY, M.D., of St. Louis.

From the *N.Y. Med. Jour.*—While I am far from denying that the complete and sufficient destruction of the initial lesion, at the right time and in the right way, may, under certain circumstances, avert general syphilis, still I long ago said: "I believe that in a certain number of cases destruction of the initial lesion would prove futile, as I am of the opinion that the virus is soon carried to the lymphatic glands, as is evidenced by these glands undergoing the same processes as obtained in the primary sore, and this would explain why total destruction of the inoculated parts has generally proved unavailing." In the section on treatment, in the paper referred to, which I shall take the liberty of quoting at length, I made the following statements:

"As a logical result of the views which have been expressed as to the pathology of syphilis (that is, absorption by the lymphatics), it has long seemed to me that an early extirpation of the enlarged lymphatic glands contiguous to the initial lesion would in some instances avert constitutional infection. This would certainly be, to say the least, as legitimate an operation as excision of the chancre itself, which is looked upon favorably by some excellent authorities, although, even from my standpoint, I would regard this latter procedure as generally unavailing for reasons already given. By writers such as Lee, Lancereaux, and others, who do not deny that the syphilitic virus is carried to the glands by the lymphatic vessels, this operation might still seem to be justifiable, as depriving the blood of one of its sources of infection. While not bearing directly on this subject, but still of interest in this connection, we find Niemeyer writing that 'it is quite possible that at no distant day the danger of pulmonary tubercle, which the presence of the cheesy residua of enlarged glands produces, will take a place among the indications for the extirpation of peripheral lymphatic tumors.' It would be advisable to remove enlarged lymphatics following the initial sclerosis at the earliest period practicable, when they had first begun to indurate. . . . Again, if it be admitted that lymphatic glands remain as foci of infection, . . . it would not be bad practice to remove them."

Some years after the foregoing was first written, I had the good fortune to read the very remarkable papers by M. Raynaud. These experiments of the late distinguished French physician, which seem to be little known, but, so far as I am aware, never contradicted, appear to my mind to be conclusive so far as vaccinia is concerned, and also by a logical analogy for syphilis. Raynaud has demonstrated (*a*) that the virus of vaccinia is conveyed to the system at large by way of the lymphatics; and (*b*) that extirpation of the vaccinal *bouton* alone is ineffectual as regards general infection, but that this end is completely gained when (for reasons that he clearly indicates) both the contiguous glands and the vaccinal lesions are suppressed.

## THE LOCAL TREATMENT OF SYPHILIS.

From the *Therapeutic Gazette*, Oct., 1885.—As to the local treatment of syphilis, there is no dissension as to its value, or rather necessity, in certain forms of the affection. To have gathered and critically discussed all the various indications for a local medication of syphilitic affections is the merit of an exhaustive treatise written by Dr. J. Grünfeld, appearing in the *Wiener Klinik*, No. 3, 1885, from which we abstract and condense the most important conclusions.

The objects of local treatment are cleansing and disinfection of the affected area, reduction of inflammation, and cauterization.

Grünfeld holds that cases of a light nature and recent standing do not require any local attention. To this class belong syphilitic (mucous) patches, papules, and nodes.

In extensive tissue-destruction, with ulceration and scab-formation, such as in rupia and allied ulcerative processes, topical applications are indispensable. The scales are to be saturated with olive oil or carbolized oil (acid. carb., 1 to 10 olei oliv.) until they soften and fall off spontaneously. Lukewarm baths have the same effect. The remaining defects yield then readily to a combination of the mercurial and the soap plaster. As to the treatment of the so-called wet papules, Grünfeld advances the following indications:

1. Removal of the purulent secretion from the diseased surface, obtainable through baths of lukewarm water, or through disinfectants, such as carbolic acid or chloride of lime. After the bath a disinfectant wash is necessary, with solutions of carbolic or salicylic acid, thymol, chloride of lime (one to two per cent.), or sublimate (one to two per thousand).

2. Removal of inflammation from the affected skin-area. The part is to be covered first with medicated gauze, and then with cold compresses. Solutions of sulphate of zinc (one-half to one per cent.), chloride of zinc, alum, borax, acetate of lead, or even Goulurd's extract, or eligible menstrua for the medication of the gauze.

3. To prevent the spreading of the affection. This can be effected by a thorough isolation of the affected skin-area by dry cotton.

4. The formation of a new integument, which is facilitated by astringent coverings favoring the generation of a new epidermis. Solutions of calomel (two to three per cent.), chloride of zinc, chlorate of potassium, salicylic acid, and caustic potash, applied with a brush, will ordinarily achieve the desired effect.

5. Complete removal of isolated or confluent papules by an energetic caustic, such as the sublimate (1 to 20-25, concentrated acetic acid), applied carefully with the brush, after which the part is covered with dry cotton. Labarraque's method (solution of chloride of sodium and calomel) or Zeissl's fluid (calomel and liquid chlorine) are also serviceable. After this procedure, the application of astringent drugs hastens the healing process.

The scurf and scales usually appearing on the head are to be anointed with oil or vaseline every evening, so as to induce their falling off. In the case of pustules appearing on other portions of the body covered with hair, a more energetic procedure, such as the application of ointments of oxide of zinc, bismuth, white or yellow precipitate, is necessary.

Psoriasis palmaris and plantaris require special and careful attention. In light forms of this affection covering with mercurial plaster alone suffices. Before changing the plaster it is well to cleanse the part thoroughly with lukewarm soap-water. In cases with thickened epidermis, which show little or no tendency to improvement, the sublimate-collodium (sublimate 1 grm., ol. ricini 2 grm., collodii pari 20 grm.) is to be painted on twice daily in two or three thin coats. In some cases ointment of white precipitate, oxide of zinc, or bismuth rubbed into the part daily act well. The mercurial plaster is, however, more powerful, and scarcely dispensable in the ulcerative form of psoriasis. Still, in spite of the most careful and specialized local treatment, the healing process is not infrequently so tardy as to require a constitutional treatment.

In syphilitic onychia, Grünfeld recommends the frequent cutting of the nails and the filing off of protruding parts of them. The mercurial plaster will soften the thickened margins and scaly masses.

Of higher importance, and requiring a more energetic therapeutic interference, are the gummata. In the nodes and ulcers of a syphilitic nature the first therapeutic requisite is the careful removal of the scabs by lukewarm baths or ointments.

Experience has invariably demonstrated the advantage of adding sublimate to the lukewarm baths taken in the cure of syphilitic skin-affections: 5 to 10 grammes are usually added to the quantity of water required for an ordinary bath-tub, while for local washes of the body 1 to 2 grammes suffice. Iodide of potassium, of course, can be similarly used. In fetid ulcers, Grünfeld suggests the addition of thymol or carbolic acid. In diphtheritic processes the strong caustic remedies are indicated, such as nitrate of silver (the solid stick, or in solution of 1 to 10), sulphate of copper in a concentrated watery solu-

tion (1 to 5-10), calomel in concentrated solution of acetic acid (1 to 10-15-20), or, finally, the hot iron. In ulcers of a phlegmonous tendency, covering with the tar and plaster of paris powder, alongside of proper antiphlogistic measures, are recommendable after antiseptic washes of chloride of lime (one to two per cent.), or carbolic acid (five per cent.).

After having converted the ulcer into a suppurating wound, iodoform and the mercurial plaster are our greatest stand-by. The latter enjoys so great a reputation in these affections that it is not infrequently employed as a diagnostic agent in doubtful cases.

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### CONDITION CONTRA-INDICATING THE USE OF MERCURY IN THE TREATMENT OF SYPHILIS.

A. COOPER, F.R.C.S., in a paper before the British Med. Ass'n (*Medical Record*).—Mercury should not be given to phthisical subjects, unless the chest affection is slight and the patient's health is good in other respects. When albuminuria exists mercury must, of course, be withheld, unless there is reason to believe that the renal affection is due to syphilis. When syphilis exists in scrofulous subjects, if the symptoms of scrofula are not very severe, mercury may be given with care in small doses. Mercury is contra-indicated in profound anemia, when non-specific. The least symptom of sloughing or phagedena should prevent any thought of administering mercury. If any of these complications set in during a course of the medicine, it should be at once discontinued. Alcohol and tobacco should be avoided or used sparingly during a course of mercury. Exercise and fresh air tend to prevent salivation, and the skin should be kept perfectly clean. Confinement to the house is desirable when any eruption appears.

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### REINFECTION WITH SYPHILIS.

*Medical News*.—Prof. NEWMANN.—As to whether syphilis can be acquired more than once, that it has not been witnessed by Baresprung, Sigmund, and Fournier, but has been met with by Diday, Zeissel, Bumstead, Hutchinson, Lee, and other equally careful and experienced observers. Newmann concludes, after carefully considering this subject, that syphilis rarely occurs but once in the same individual. Yet undoubted cases have been observed. The criteria of reinfection are a clear history of first infection, an initial lesion, enlargement of inguinal glands, and subsequent secondary manifestations. It is well known that a chancre contracted during the time one is laboring under syphilis, is liable to become indurated at the base, so that a hard lesion seated on the genitals, without concomitant adenitis, and the consecutive constitutional symptoms, is not an indication of a second attack.

In conclusion, I will say that there is an opinion prevalent among the people that syphilis is an incurable disease; and that this false impression sprang from members of the medical profession, who, ignorant of both the nature and treatment of the disease, sought to shield under this guise their ignorance, and themselves from censure, should the patient fail to recover under their care, I have not the least doubt.

There is no fact more thoroughly established than that a person suffering with constitutional syphilis cannot be reinfected, and that the immunity thus afforded continues throughout all the stages of the disease. Then, if we have a patient presenting himself with chancre, we are forced to conclude that he has never had syphilis; or that he having had it, has been perfectly cured of the previous infection. Should investigation prove that he has had the disease prior to this, I will venture the affirmation that he has had the benefit of a thorough course of mercury, and at the time he became reinfected he was entirely free from the poisonous influence of the previous attack.

## AFFECTIONS OF THE EYE.

### THE SANITARY CONDITION OF THE SCHOOLS OF HAMILTON, WITH SPECIAL REFERENCE TO THE SIGHT AND HEARING OF THE PUPILS.

By A. N. ELLIS, M.D., Hamilton, O.

From the *Cincinnati Lancet and Clinic*.—Just now there is no question that is exciting greater interest in educational circles than the influence of school-life on eye-sight. Dr. Ware, the eminent English oculist, began his examination in this particular field of enquiry as far back as 1813, by examining the eyes of 10,000 foot-guards, and finding that he had struck a mine worthy of exploration, afterward carried his work into the Chelsea military schools, and also the great universities of Oxford and Cambridge. He made the discovery that the refraction and accommodation of the eye were constantly changing, and that near-sightedness increased with the amount of study, and, within certain limits, with the age of the student. Important as Dr. Ware's work was, it did not attract that attention in the scientific world that it deserved, and more than half a century passed before the industry, genius and learning of Prof. Cohn, of Breslau, brought the matter fully before the reading public. He went about the subject in a systematic and workmanlike manner, tracing the effects of long and severe strain upon the eyes of school children, and even carried his investigations among persons brought up to skilled mechanical labor. In all, he examined about 12,000 cases.

In my examination in your schools I have arranged all eyes under three classes—normal, myopic, or near-sightedness, and hypermetropic, or far-sightedness.

We speak of normal vision, when the rays of light entering the eye are focussed accurately upon that portion of the retina which is most directly sensitive to light, so as to present a clear and well-defined image. The *hypermetropic* eye is the kind of an eye in which, owing to a peculiar malformation, the ball is no longer a perfect sphere, but is shortened in its antero-posterior diameter, so that parallel rays entering the eye are focussed behind and not upon the retina. The *myopic* eye is one which becomes elongated from before backward, and hence parallel rays are focussed at a point in front of the retina. In both far sighted and near-sighted eyes, there is an inevitable impairment of vision. As hypermetropia is due to an arrest of development, we will dismiss it with the remark that such an eye is not necessarily a weak or diseased one. The trouble is generally easily detected and readily remedied by wearing a suitable lens. Myopia, on the other hand, is very rarely congenital, but is produced by a number of causes, many of which are clearly connected with school work. Moreover, it is a progressive disease, and when once set up is attended with numerous complications and sequelæ. Near-sightedness increases in every country just as it grows in mental culture. Myopia and insanity are the price of civilization and higher education!

Myopia is never found among the savage tribes of Africa, the native troops of India, the Freedmen in the Southern States, or the Indians on our western plains. But it is found in our schools, and just as the studious and ambitious boy pursues his studies, mounts from the forms of the primary school, and climbs upward with advancing years, until finally he reaches the high school and the university, just so does his difficulty of seeing increase. It is the price he pays for a liberal education!

In connection with progressive myopia the following figures are especially interesting:

Cincinnati, 631 students. District schools, near-sighted 10 per cent.; intermediate 14 per cent.; high, 16 per cent.

Brooklyn Polytechnic, 300 students. Academic department, 10 per cent.; collegiate department, 28 per cent.

New York College, 548 students. Introductory class, 29 per cent.; Freshmen, 40 per cent.; sophomore, 35 per cent.; junior, 53 per cent.; senior, 87 per cent.

Buffalo public schools, 1,008 pupils. The per cent. of near-sightedness increased from 5 per cent. at seven years of age, to 26 per cent. at eighteen years of age. It was further ascertained that one out of every four graduates of the Buffalo high school was near-sighted.

Dayton public schools, 765 pupils. District schools, 15.35 per cent.; intermediate, 17.65 per cent.; high school, 18.32 per cent.

Oxford public schools, 255 pupils. Primary, 7.92 per cent.; intermediate, 18.32 per cent.; high school, 24.13 per cent.

Dr. B. Alex. Randall, of Philadelphia, has just published in the *American Journal of Medical Sciences* a very valuable article on "A Critical Study of Statistics Obtained by Examinations of the Refraction, Especially Among Children." His essay, we may safely say, is the best that has ever appeared. The following conclusions are based upon 146,522 examinations:

"1. Myopia is almost unknown in infancy and very infrequent before the beginning of school-life. In the earlier school years its percentage is still low and it is only in the advanced classes, especially of the German schools, that it ever attains preponderance. It has been found in not more than 39—2.54 per cent. of 1,534 eyes of infants, in not more than 28—7.86 per cent. of 365 eyes of children under the school age, and in only 1,582—7.79 per cent. 23,315 eyes of children examined during the first three school years.

"2. Hypermetropia is the enormously preponderating condition in infancy and early childhood, and the first years of school-life witness little reduction in its proportion. Outside of the schools it remains by far the most frequent refraction throughout life.

What are some of the causes of so much nearsightedness? The essential condition for the production of myopia is a diminished power of resistance in the ocular tunics. There are certain conditions which accelerate the appearance of myopia in those who are predisposed to it, and may even induce it in cases in which there is no reason to suspect the existence of any such tendency. The most potent of these is *the employment of the eyes in childhood for near work in defective light*. Then, too, is the practice of studying at night. That will wear out the eyes quicker than anything else. Day-light is God's light, you can't improve it!

Is myopia a preventable disease? Yes!

At what age does it generally appear? Prof. Donders, the eminent oculist, has never known a case to appear after the twentieth year, and the lamented Graefe gave it as his opinion that it rarely begins after the fifteenth or sixteenth year of life.

The most eminent authorities agree that 350 square inches of glass per capita is the minimum amount of lighting space, and also that the window space should never be less than 16 per cent. of the floor space, and in the densely populated districts of cities, as much as 25 per cent. Around every school house should be an inalienable strip of ground at least double the width of the height of the adjacent buildings.

We find nature's standard of purity in the external atmosphere and other things being equal, the nearer we approach this in our dwellings the healthier we will be. Estimates vary greatly as to the amount of ventilation, some placing it as low as 100 cubic feet per hour, while others consider 500 as not too much. Even this latter figure is found very often to be insufficient.

### CATARRHAL OPHTHALMIA—"PINK EYE."

By L. WESSER Fox, M.D., Ophthalmic Surgeon to the Germantown Hospital.

This disease was quite rife among domestic animals several ago, particularly among horses, and it was at this time that the name "pink eye" was given the disease by the laity, on account of the peculiar pink color of the eye-ball.

Catarrhal ophthalmia has been known suddenly to attack a great number of persons who happened to be exposed to the same general exciting causes, and we have accounts of epidemics where whole battalions of troops were affected, and where the disease spread itself more extensively, attacking many of the inhabitants of a town or district.

The secretion from an eye infected with this disease is the medium through which the disease is propagated. These secretions may be passed from animal to man, also from man to man, and in this manner is the virus disseminated through communities. I have also observed that the discharge in catarrhal ophthalmia, when conveyed to the mucous surface of the conjunctiva either by fingers or a towel, is apt to excite a more violent discharge than the original ophthalmia. No class of people are exempt from it; proving itself, however, the more virulent and intractable among the emaciated and neglected. Eyes that are constantly congested or suffering from any form of conjunctivitis, produced by any cause, are prone to become the seat of the disease. It reproduces itself by direct contact only.

This disease is not limited to the conjunctivæ, but the lining membrane of the nose may become the seat of the affection.

For the last three years sporadic cases have from time to time presented themselves at our clinique. I attribute the present epidemic due, in a manner, to the extreme cold weather of last winter and an atmosphere laden with particles of dust which produced a mild form of conjunctivitis in many individuals who, coming in contact with sporadic cases, aided in propagating the infection until the disease became epidemic, and again I have found upon inquiry that many horses are at present afflicted. A coachman was recently under my care who traced his attack to a horse that he was attending, suffering with "pink eye." Several members of this man's family contracted the disease. Another family traced the source of their trouble to a favorite dog suffering with "bleared eyes," not noticed by the parents until their attention was called to the fact by myself. Another patient declared his eye trouble developed in about ten hours after a piece of mucus was blown into his eye by the snorting of a horse that he was leading by the bit, this animal having a slight discharge from his eyes and nostrils at the time.

The disease is ushered in by a sensation of roughness of the lid as if a foreign body had found its way into the palpebral sac—profuse lachrymation which in a few hours changes into a muco-purulent discharge. At this time the conjunctiva becomes swollen and the eye red, and at times painful. Pain is not an early symptom, but usually manifests itself from twelve to twenty hours after the discharge and œdema of the lids. At this stage the Schneiderian membrane becomes inflamed, and the patient complains of a "cold in the head," while in severe cases a feeling of general malaise comes on and temperature rises.

The prognosis is favorable when treatment is instituted early in the disease; when neglected the sequelæ of granular lids may be anticipated. Inasmuch as the ophthalmic surgeon rarely sees these patients in private practice until serious complications arise, it is well for the general practitioner to be informed upon the more recent methods of treatment, as it is to him that an appeal is made after such domestic remedies as an infusion of tea-leaves, sour milk, etc., have proved their uselessness. The treatment of the disease is simple—any mild astringent will alleviate the trouble. A favorite remedy and a successful one is a fifty per cent. solution of boroglyceride applied every three hours. The ointment of the boroglyceride may be applied to the edges of the lids at night, or lotio chlorini, applied *ad lib.* as well as lotio boracis—arg. nit. grs. iij. to ℥j. may be relied upon as a sovereign remedy to abort the discharge. A simple domestic remedy, one convenient upon all occasions, is a tablespoonful of pulverized alum to half a pint of water—the eyes to be bathed freely every three hours.

#### REFRACTION OF THE HUMAN EYE.

Dr. D. A. RANDALL contributes a critical study based upon the examinations made by different authors, especially among schoolchildren. The

various results are tabulated, and thus made of great use to any one interested in this subject. The following inferences are deduced from them by Dr. Randall:

1. Myopia is almost unknown in infancy, and very infrequently before the period of school-life.
2. Hypermetropia is the enormously-preponderating condition in infancy and early childhood.
3. Astigmatism has been rarely sought with care, and the present data afford no definite conclusions.
4. Emmetropia, in a mathematically-strict sense, has probably no existence.
5. The question of what is normal refraction of the human eye is still an open one.—*Med. Times*, Oct., 1895.

## AFFECTIONS OF THE EAR.

### TREATMENT OF CHRONIC OTITIS MEDIA.

By W. W. SHELLEY, M.D., Cincinnati, O.

From the *Cincinnati Lancet and Clinic*.—The appalling number of cases of chronic non-suppurative otitis media renders it altogether the most important field for study in otology.

Its treatment in a rational manner began of course with catheterization of the Eustachian tube.

For quite a number of years the catheter almost supplanted all other interference.

To supplement the action of the forcible introduction of pure air, medicated air and vapor and the injection of various sorts of fluids (irritant, astringent, alterative), was resorted to.

Of late years more and more attention has been concentrated on naso-pharyngeal affections as to the starting point and the continuing cause of this trouble.

And right here it would be important to know what effect, if any, the ordinary treatment of pharyngeal troubles has in starting up the affection under consideration.

We are all perfectly cognizant of the disastrous results following treatment of nasal catarrh, and everyone must be perfectly aware of the care and study it requires to so treat the nasal and naso-pharyngeal space as to benefit the tube and middle ear, and how much more care is required not to do positive harm to them.

I have seen case after case of the most obstinate tubal and middle ear trouble (chronic) directly dependent upon nasal and naso-pharyngeal treatment.

I have myself over and over again aggravated matters instead of improving them, and that too with all the care I could exercise.

We all know that the nasal douche has been virtually discarded by aurists, even also the once apparently innocent post-nares syringe (with which I have often blocked an Eustachian tube). There are cases even in which inflation by any method, especially with the catheter, not only does no good, but positive harm. In fact, a careful study of this trouble over a long series of years has convinced me that it is a most complicated and delicate chapter.

If it is so complicated and delicate, and I fancy no one will dispute the statement, it has always been a mystery to me why some of the best men in the profession turn over the treatment not only to unskillful hands, but even to the patients themselves.

Unfortunately as yet our means of diagnosis are too imperfect to inform us as to the length of time treatment will be required, and as to how much benefit will accrue.

The majority, perhaps, when they hear that no very favorable prognosis can be made in regard to the relief of the annoying tinnitus are ready to abandon treatment.

I am fully persuaded that if all middle ear troubles could be ushered in with tinnitus it would be a most fortunate thing for this class of patients, as we would then see them early.

Of course it is not the tinnitus that is so discouraging, but the cerebral state due to the ear trouble.

Nothing is more common than to hear ear patients after inflation remark: "Now my head feels better." If my experience has taught me anything, it is that the mental depression can be relieved so that the tinnitus is no longer disturbing, even when no improvement has taken place in the hearing. The great difficulty in these cases is in tiding patients over the first few weeks or months.

It is a great mistake to think that because the Eustachian tubes are closed only catheterization will open them.

Over and over again I have found some applications of vaseline and boric acid, or, what is better (since we have such impure acid preparations of vaseline), the yellow oxide of mercury and vaseline (10 grs. to the oz.), used through the nostrils, open tubes where catheterizations had little or no effect.

In this connection I would say that salves, for me, have almost, if not quite, superseded all other applications for nasal and naso-pharyngeal troubles.

My clinical studies will, I think, justify the following conclusions:

1. Only experience of sufficient length of time (often lasting over months) in each case can determine whether treatment shall be continuous (daily) or interrupted, *i. e.*, perhaps daily for a few weeks, followed by an interruption of some weeks or months.

2. Only experience in each case can inform us whether treatment is to be directed entirely to the middle ear or entirely to the naso-pharynx, or combined against both.

3. Only experience in each case can inform us whether injections into the cervical tympani are called for.

Under this head I would say that strict medication, either of the middle ear or naso-pharynx as routine treatment is unwise till simple inflation has failed.

4. Mechanical dilatation of the tubes is rarely necessary or advisable.

I would remark here that only in extremely dry states of the tubes is dilatation followed by much success.

5. Hearing tests are not reliable, and hence patients with great deafness, great loss of bone-conduction, etc., should not be sent away till the "test by trial" has been thoroughly gone through with.

6. Simple inflation failing, the greatest attention should be given to the naso-pharynx, even though it is in an apparently fair condition.

7. Syringing, douching and swabbing the naso-pharynx should be abandoned.

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#### HERNIAL PROTRUSION OF THE MUCOUS MEMBRANE OF THE TYMPANIC CAVITY, THROUGH THE MEMBRANA TYMPANI, IN SOME CASES OF CHRONIC PURULENT OTITIS MEDIA.

By CHARLES H. BURNETT, M.D., Prof. of Otolary in the Philadelphia Polyclinic, Etc.

From *The Medical News*, October, 1885.—Sometimes there may be observed a protrusion of the mucous membrane of the promontory, through a perforation of the membrana into the fundus of the external auditory canal, in cases of chronic purulent otitis media.

The chief interest and importance of these cases consist in the resemblance of the protrusion to granulation tissue, or to a small polypus, and the possible mistaking it for such formations. There are, however, some distinguishing features connected with the hernial formation which will enable the observer to make a correct diagnosis. The hernia of the mucous membrane is sensitive to the touch, forms suddenly, does not bleed easily upon being touched, but bleeds profusely if wounded, and yields quickly to the proper



treatment, which, however, is quite different from that applicable to granulations or to polypi. The latter are not sensitive, bleed easily, as a rule, upon being touched, and are snared off or cauterized without pain. Granulations may be made to disappear by the application of powdered borax in cases where they are small, or by cauterants if larger. Hernia of the mucous membrane of the tympanic cavity is made worse by any endeavor to snare it off, or to cauterize it.

It closely resembles, in appearance, a polypus with a broad base, but can be properly treated in two ways only, first either by the application of powdered boric acid, or boric acid and alum in the proportion of ten grains of the latter to one ounce of the former, or by the instillation of absolute alcohol.

The discharge attending it is usually slight, and of a thick, purulent nature. There is no tendency to spontaneous bleeding from the protruding mucous membrane, though I have observed it exhibiting a tendency to recur at the menstrual epoch in women. It is also worthy of note that this affection of the tympanic mucous membrane has been observed by the writer only in women.

#### INDICATIONS FOR OPENING THE MASTOID.

By JOHN F. FULTON, M.D., St. Paul, Minn.

From the *Northwestern Lancet*.—The surgeon who waits for symptoms of external inflammation as the only indication for opening the mastoid cavity will allow patients to have much unnecessary suffering and a curable disease to advance to an incurable stage. Yet this is a very common opinion. It often happens that one of the most difficult questions of surgery is to decide whether or not the mastoid should be opened. However as a result of labor and investigation the question has been reduced to a gratifying degree of certainty.

With the class of cases in which the symptoms indicate beyond doubt that there is pus in the mastoid cells and purulent degeneration of the reddish pulpy substance of those parts, there can be no dispute but that they should be exposed by an operative procedure and thus an exit provided for the morbid material. Such a measure relieves pain, hastens the curative process and removes the possibility of intra-cranial complications. The cases are indeed very exceptional in which this form of the trouble cannot be diagnosed with absolute precision. There are external manifestations and a train of symptoms so common that it is not necessary to reproduce them here.

A case was referred to me by Dr. Riggs. The patient was a young man 21 years of age. A few weeks before consulting me he contracted a severe cold, which resulted in an acute suppurative inflammation of the middle-ear. This soon extended to the external canal and adjacent tissues. The ear stood out from the head, the auditory canal was closed and the structures behind the auricle greatly swollen and boggy. There was considerable enlargement of the glands of the neck. The discharge had been profuse and the suffering of the patient very great. An operation was almost immediately recommended, to which the patient gave prompt consent. The operation proved that the diagnosis was correct, and the patient made a rapid recovery.

Unfortunately indications as plain as those of the above case do not always guide us. Clinical history proves that swelling and tenderness of the mastoid region are often absent in cases in which we get our best results by operative procedure. Consequently these symptoms are of but secondary importance, depending perhaps upon the compactness and thickness of the external plate.

Dr. Fulton then relates a case in which usual symptoms indicating supuration of the mastoid cells were absent.

There is another class of cases, not as numerous, yet met with quite frequently, which give rise to much greater difficulty in diagnosis. The patient suffers with great pain as one of the earliest symptoms. After the drum-head has been perforated either by the surgeon or by disease, the pain

continues. Nothing gives absolute relief. There is no external abnormality. The discharge will sometimes suddenly cease and all the symptoms become aggravated. At times, too, all the symptoms disappear only to return with increased severity. The tissues of the external canal take on the inflammation, and the walls frequently touch each other, thus interfering mechanically with the drainage. This condition of affairs soon tells on the patient's general health, and it becomes apparent that the disease is wearing the patient out. There are but few operations in surgery that give rise to greater relief, or seem more plainly indicated, than trephining the mastoid in this class of cases. The pain is relieved, the pus and all foreign matter in the cells obtain a free exit, the patient usually makes a rapid recovery and wonders why the operation was not made sooner. There will usually be found a condition of sclerosis in addition to the chronic tympano-mastoiditis. As the depth of bony tissue through which it is necessary to go with the trephine is greater than usual, this class of cases is more likely to result in brain complications, as the pus is more apt to burrow inward, the condition of sclerosis lying on the inner side of the external plate, having taken place prior to suppurative inflammation.

There is still a third group of cases which have been described as condensing mastoiditis. There may be no suppuration whatever, and the membrane may be intact. But a most distressing pain, radiating from the mastoid region is constantly present.

This question can be viewed from another stand-point with advantage. Are the cases acute or chronic? I make the following quotation from Dr. Buck: "Has this attack (of mastoid inflammation) occurred in a person who has had a purulent discharge from the ear for years, or has it appeared in a person whose ear is perfectly well? When this point is settled you have gotten a great way. If the patient has had a purulent discharge for years, you can at once exclude a number of symptoms which otherwise would be of value. In such cases you need not expect to find tenderness and redness behind the ear, swelling of the glands or redness along the side of the neck. These symptoms may be present, but they are more often absent, and despite their absence there may be serious disease in and around the antrum, demanding operation on the mastoid process."

Anything that indicates that pus is locked up in the middle ear or in the antrum makes one of the most important demands for the operation. This, associated with deteriorating health and persistent pain, are certain indications which should always be obeyed.

### THE PERMANENT ALTERATIONS IN HEARING PRODUCED BY QUININE AND SALICYLIC ACID.

By CHARLES H. BURNETT, Prof. of Otology in the Philadelphia Polyclinic.

From the *Polyclinic*, October, 1885.—The administration of large doses of quinine, also of salicylic acid, has long been supposed to induce permanent deafness. As a matter of fact, after such doses have been given, even only once or twice, well known symptoms, such as tinnitus aurium, and a roaring in the head and ears, and a feeling of constriction of the head and deafness, with vertigo and pain in the ears at times, ensue, varying of course, in intensity and duration with the dose given. Many authorities have supposed that the permanent deafness which, in point of time, often follows the large doses named, is due really to the disease for which the drug is given, and it would be difficult in many instances to deny this, were it not for experiments upon cats and other animals, which demonstrate the lesion and its nature, in the labyrinth, which can be evoked by large doses of quinine. Salicylic acid is a comparatively new remedy, and not having been used so frequently as quinia, it has not been as frequently considered the cause of deafness.

If, however, to a strong and perfectly healthy man, without previous aural disease and without any syphilitic taint, doses of quinia, either the sulphate or the muriate, be given in quantities varying from fifteen to one hundred and

twenty grains, there will be observed, within a few hours, all the symptoms detailed above. This change is due the intense congestion of the mucous surface of the drum-membrane, so well known to occur after large doses of quinia.

The participation of the labyrinth, *i. e.*, the nervous elements of the auditory apparatus, is shown by the inhibition of bone-conduction and also by the inability to hear high notes by arial conduction, or by a very limited power of perceiving them.

Salicylate of soda and salicylic acid do not seem to affect the ear as quickly nor as extensively as quinia. There seems to be no doubt, however, that large doses of salicylate of soda, let us say, fifteen grains every hour for five hours, will induce tinnitus aurium and deafness, or make those symptoms worse if they already exist, and aid in the production of permanent changes in the labyrinth, as asserted by Kirchner. It is, in fact, claimed by Schwabach that even small doses of quinine or salicylic acid may produce permanent deafness. In such cases it has been suggested there may be an idiosyncrasy rendering the subject especially liable to affection by these drugs.

The peculiar effects of quinine and salicylic acid upon the auditory apparatus are due to the vessel-dilating power they possess. To overcome this effect, it is recommended (Schilling) that a vessel-contracting drug, like ergot, be administered. Schilling states that in eighty-seven cases he combined salicylate of soda with ergot, and found that in seventy-six per cent. of the cases no deleterious effects of salicylic acid were detected. In nine cases in which he combined ergot with quinine, one gramme of the latter to one gramme and a half of fresh *secale cornutum* or one gramme of ergotin, the cases had either no aural symptoms or very slight ones; whereas, in those instances in which quinine alone was used, the aural symptoms were intense. It also appears that the anti-febrile and anti-rheumatic effects of these drugs, respectively, are not impaired by such combinations with a controlling drug. In this connection it will be well to recall the suggestion of Finkler and Prior that amorphous borate of quinine is an efficient antipyretic and antiperiodic remedy, possessing, besides, the great advantage of not inducing tinnitus aurium to the same degree as the muriate of quinine. Without doubt, an intolerance of the salts of quinine most in use exists in some, while it is absent in other subjects.

## AFFECTIONS OF THE SKIN.

### SOME POPULAR ERRORS IN REGARD TO SKIN DISEASES.

By J. CLARK M'GUIRE, M.D., of Washington, D. C.

From the *Louisville Medical News*.—Familiar appellations for skin diseases are not confined to the laity. In former days, when the names of affections of the skin were surrounded by obscurity, when many terms were used to designate a particular disease, there was some excuse for physicians using the more familiar terms known to the laity; but at the present time, when, with few exceptions, diseases of the skin are known the world over by scientific terms, there is no more excuse for a professional man using a wrong and unscientific term for these diseases than for any other class. Even in our colleges, with few exceptions, skin affections are either slighted or completely ignored. It is presumable they are neglected to such an extent on account of their unimportance, but in refutation of this one has only to refer to the literature of dermatology, to such books as Hebra on Diseases of the Skin, five volumes, or to recall such names as Hebra, Kaposi, Neumann, of Vienna, Sir Erasmus Wilson, Tilbury Fox, Addison, of England, Bulkley, G. H. Fox, Duhring, and Piffard, of this country, and a host of others. There are physicians of good standing who acknowledge they do not even know the names of the majority of skin diseases, who have no more idea of the meaning of the words morphea, xanthoma, than they have of who is the

king of the Sandwich Islands, and yet they would not acknowledge their ignorance of any other class of diseases. Physicians, even those known to the scientific world, while discussing some important scientific question before a body of professional men, have been known to use the terms "liver spots," "milk crusts," "tetter." Such expressions, in the majority of cases, would be overlooked or accepted as correct terms, and yet if terms of like kind were used to designate diseases of other organs, the speaker would be laughed at, or at least thought to be very careless as to his nomenclature of important diseases. It seems permissible to apply to skin diseases the most diverse, ridiculous, and unmeaning names, while, if referring to diseases peculiar to the eye or other important organs, the doctor would at least endeavor to use scientific and correct terms. Let us see what some of the most common expressions mean, if they have any definite meaning, "Tetter," according to Tilbury Fox, is of uncertain application. Bulkley refers to "dry tetter" as psoriasis, "eating tetter" as lupus. It may mean eczema. Webster defines it as synonymous with herpes, and it may mean "skin disease," "bakers' itch," "grocers' itch," may mean either eczema or lichen. "Blood boil" has no scientific meaning, and is applied to various diseases. "Red gum," "tooth rash," "white gum," may refer to lichen in children, or eczema papulosum. The expression "army itch" would lead one to suppose it was distinct from scabies, yet we know it to be the same as ordinary scabies. "Milk crusts" usually means eczema vesiculosum, but, as Tilbury Fox says, it has no significance, and may be made to include many different affections. "Liver spots" may refer to chloasma, a pigmentary affection of the skin, or to tinea versicolor, a vegetable parasitic disease. "Hives," according to Duhring, is synonymous with urticaria, according to Tilbury Fox, with chicken-pox. (Outside it means spasmodic croup.—Ed.)

We have heard physicians say authorities differed so materially in regard to the etiology, pathology, and treatment of skin affections they did not think it worth their while to make a study of the subject; but if this is true, is it only applicable to diseases of the skin? In looking up the treatment of Asiatic cholera, I find the very best authorities in general practice differ very radically. Dr. McClelland, United States Army, says, "The evidence is conclusive that the exhibition of opium, followed by alterative doses of calomel, almost invariably arrests the disease when in the premonitory stage." Dr. Johnson, Kings College, London, regards evacuants safe, opiates dangerous, in the early stages of the disease. Sir Thomas Watson entirely agrees with him. Dr. John Murray, Inspector-General of Hospitals Indian Medical Service, holds exactly the opposite views, that is, that evacuants are dangerous, opiates safe treatment in the early stages. Dr. John Sullivan, British India, altogether rejects the treatment by elimination. William Stevens, London, believes in the saline treatment. Dr. Loomis says the first great object of medicinal treatment is to control the prodromal diarrhea. For this purpose opium is the most reliable drug. Dr. Naphey refers to opium as though, still much employed in the acute stages of the disease, it is no longer regarded as the sheet-anchor in cholera. Brown-Séquard states that morphia hypodermically at the onset will cure the disease.

As to the etiology of skin diseases, how often we hear the expression "bad blood." Has this term any meaning? If it has, it must mean a depraved state of the blood that can be recognized by chemical reagents, or by the microscope, but Bulkley says, "Chemical and microscopical studies fail to show, there is 'bad blood' in any of the diseases of the skin." Another popular error is the danger of "driving in" skin diseases. We have even known a physician of good standing to sum up the whole treatment, etiology and diagnosis of skin diseases in general, in the following graphic language; "Skin diseases are usually caused by bad blood. Call the disease eczema, or—, or—, give a little arsenic internally, oxide zinc ointment locally; but above all be careful not to drive in the disease too soon. This is very important." To quote Dr. Bulkley again, "Some old woman, male or female, medical or lay, has warned the patient or friends that such and such an eruption should by no means be cured on account of the danger of driving in the disease."

## NOTES ON HYPERIDROSIS.

By HENRY WILE, M.D., Atlanta, Ga.

From the *Atlanta Med. and Surg. Jour.*—The disease is called Hyperidrosis (excessive sweating), and belongs to the class of cutaneous affections known as anomalies of secretion. The term hyperidrosis is used to express that condition in which there is primarily an unusual and more or less chronic functional activity of the sweat glands, whereby the quantity of the secretion is increased.

There are two forms called respectively hyperidrosis universalis and hyperidrosis localis.

Hyperidrosis universalis is met with in middle age or later years of life, also in infancy. When the sweating is profuse it gives rise to sudamina, especially in the delicate skin of the infant. The treatment of this form is simple, and consists in the use of cooling lotions, such as equal parts of alcohol and rosewater, followed by a powder of starch, or equal parts of starch and oxide of zinc.

Hyperidrosis localis usually affects the face, scalp, genitals, axillæ, palms and soles—one or several of these localities, the last three being the favorite seats. It is mostly encountered in the young of both sexes, and is generally associated with an anæmic, chlorotic, or debilitated condition, though sometimes, but exceptionally, in apparently healthy individuals. The disease is often a source of discomfort, even distress, and when affecting the palms of the hands it incapacitates the individual for various kinds of special work. The palms have a cool, moist, clammy feeling, necessitating frequent drying and, under social circumstances, occasioning deep embarrassment.

Where profuse sweating continues for a time, and is neglected, there soon develops the condition known as bromidrosis. The secretion more or less absorbed by the horny layers of the epidermis, and soaking into the leather of the shoes, undergoes chemical decomposition and emits a disagreeable odor. For it has been shown (Neumann, *Lehrbuch der Hautkrankheiten*, 1880) that if the soles of the feet are kept scrupulously clean, the secretion of the sweat glands will have no odor. Where, therefore, the disease is allowed to develop, or continue without interference, the secretion quickly undergoes decomposition and the patient is obliged to wash the feet and change socks several times daily, or go around enveloped in an odoriferous cloud. Thus it becomes a loathsome affection.

The prognosis in all cases of hyperidrosis is favorable. Most cases are amenable to treatment, and a cure or great relief can always be promised.

In the matter of treatment, one of the first injunctions to the patient is *cleanliness*. The milder forms, affecting the axillary, genital regions, palmar and plantar surfaces, usually yield to simple measures, such as the use of astringent washes and powders.

Tannic acid ten to thirty grains to a half pint of water; extract aconite ten grains to alcohol and ether each four ounces; a saturated solution of boracic acid; naphtol ten to forty grains to the ounce of deodorized alcohol, will all be found of value. Painting the parts with pure tincture of belladonna often acts happily. Bulkley recommends for most cases chloral, one ounce to the pint of water. These lotions should be applied freely for three to ten minutes at a time, two or three times a day, according to the severity of the case, each application being followed by the use of some absorbent powder. The following may also be found to be of advantage:

Salicylic acid ten grains to the ounce of starch; burnt alum one drachm to salicylic acid and venetian talc, each two ounces. Where the skin is in apposition, as in the groins or between the toes, the powder should be used with absorbent cotton. Sometimes a case will resist ordinary measures, and, being obstinate, will require persistent systematic treatment.

In hyperidrosis of the soles, when the simple means indicated above fail to effect a cure, the diachylon ointment treatment, as originally recommended by Hebra, will give satisfaction. The ointment is spread on linen and applied to the soles of the feet, which should be previously washed and

carefully dried. The plasters may be kept in position by means of a thin gauze bandage or socks. The application ought to be made twice daily for fourteen days, each time the surface of the skin being rubbed gently with dry, absorbent cotton. It is better for the patient to keep a recumbent position during the treatment, or walk as little as possible. Water is also to be kept from the parts during the treatment. The old and diseased epidermis gradually exfoliates, and a new, healthy surface is exposed. The use of some absorbent powder should be kept up a few days longer. Occasionally the procedure may have to be repeated, but by this means a thorough cure can be effected.

#### ECZEMA WITH VARICOSE VEINS.

Dr. ARTHUR VAN HARLINGEN, of Philadelphia (Report on the progress of Dermatology, *Med. Times*).—Instead of Martin's bandage, Unna now uses the following procedure: Take, for instance, a neglected case of varicose veins partly covered by moist and partly by dry eczema, on the under anterior third of which is a dirty necrotic undermined mass surrounded by a soft loose border. After a thorough cleansing with soap and water, he paints the whole over as far as the ulcer with warmed zinc paste (℞ zinc. oxid., gelatin. pur., ℥ 10; glycerin., aquæ, ℥ 40. To be painted on warm). Upon the ulcer itself iodoform is dusted, and a layer of lint placed which may also be saturated with iodoform or sublimite. He then takes an ordinary roller, such as is used in bandaging with plaster of Paris, and rolls this up from each end so that it has at last two heads of equal size. Thus rolled up it is dipped into water, squeezed out, and then applied in the following manner to the leg covered with paste and not yet quite dry. The patient sits with his leg raised opposite the surgeon, who grasps with his two hands the two heads of this bandage so that the connecting piece between the two heads comes into contact with the limb behind and opposite the ulcer. The two heads are then brought forward and covered over the ulcer, already covered with the lint or gauze. The heads of the bandage are then made to change hands, and firm tension is made, so that the leg at the level of the ulcer is plainly diminished in circumference. The two heads are then carried backward and crossed either above or below, but under all circumstances opposite to the ulcer. The heads again change hands and are carried forward, crossed in another place and tightened, and so on until the whole of the affected part is covered by the bandage. A second moistened prepared bandage is then immediately placed over the first, for the purpose of filling up the thin places of the first and strengthening it. The second may be put on in the same way as the first, but it is usually done in the ordinary way. The bandage soon dries, and it is allowed to remain on from two to four days, according to the amount of secretion going on under it. The pain on walking and putting the foot down soon becomes less, so that the patient's occupation is not interrupted. The more firmly the bandage is laid on, the better is the result seen on taking it off. It is therefore laid on as tightly as the patient can bear at the time. When the quantity of secretion diminishes, this "permanent bandage" may remain on eight days.

Every time the bandage is changed—it should be taken off while the leg is in a pan of warm water—an agreeable improvement in the ulcer is observed; at first cleansing of the bottom, then flattening down of the edges, then covering with healthy granulations and progressive diminution in size by advance of the border of epithelium. In the meantime the zinc paste, assisted by the restful pressure of the hardened pasty bandage, acts beneficially on the eczema, and astringently on the whole leg. The essentials are the peculiar manner of applying the bandage from both ends, and the preliminary application of the paste. This method of application leaves absolute permeability. It is important to cover the healthy skin with the paste, so as to get a firm basis of attachment for the bandage.

# MIDWIFERY,

## AND THE DISEASES OF WOMEN AND CHILDREN.

### EPITHELIOMA OF THE CERVIX, COMPLICATING LABOR.

By CARLTON C. FREDERICK, M.D., Asst. in Obs. Niagara Med. Coll.

From the *Buffalo Med. and Surg. Jour.*, Nov., 1885.—Epithelioma of the cervix, complicating labor, is a rare occurrence in the experience of the general practitioner. The author of the paper then gives the history of his case, followed by a brief resumé of the literature of the subject:

After delivery of the placenta, the uterine cavity and vagina were irrigated with a 1-2000 solution of corrosive sublimate, hot, for the purpose of checking considerable bleeding, which presumably came from the rent in the cervix. As the bleeding was too much, in one half-hour I again irrigated the vagina with hot water, and the oozing was controlled.

The sublimated vaginal douche was ordered given every twelve hours. On the second day, the discharge became very offensive, and the temperature rose to 102½° F. The douche was given every six hours, and the temperature dropped to 100°, above which it did not again rise. On the third day, several large shreds came away, and I removed several more with the finger—evidently some of the cancerous tissue broken down by pressure. She has made a good convalescence so far. The child had sore eyes for several days.

In the literature of this subject, I have found considerable matter of practical and statistical value. Much of it that comes from the German obstetricians, I have borrowed from an article on the same subject by Dr. R. W. Stewart, of Cincinnati, in the *American Journal of Obstetrics*, for June, 1885.

Lusk (*Science and Art of Midwifery*) says: "The existence of pregnancy hastens the development of cancer, the more rapid growth of which is probably referable to the increased vascularity of the uterus and to the correspondingly augmented activity of its nutritive processes. If the morbid process has involved the entire portio vaginalis, or even extended into the os internum, the inelastic tissue of the cancerous growth has replaced the expansile muscular fibres, and an opening of sufficient calibre for the passage of the fœtus can only be produced by rupture and contusion of the degenerated and unyielding cervix. The consequence of the excessive pressure to which the cervix is subjected during labor is necrosis of the contused tissues, which is frequently followed by septicæmia. The prognosis is doubtful for both mother and child.

Dr. Lusk says of treatment: "In cases where the disease is confined to the cervical portion, either amputation or excision should be performed, preferably at about the fourth month. Abortion does not necessarily follow. In advanced cases, where the carcinomatous process has invaded the contiguous tissues, operative interference should be postponed until the end of gestation. Upon the advent of labor, if the child be living, the Cæsarian section certainly holds out the hope of saving one life, and probably does not greatly increase the peril to which the other is exposed."

Playfair's opinion is that: "If it is possible, the disease should be removed, as much as can be safely done, during pregnancy, which should be brought to an end before the full period. During labor, incisions should

form a preliminary to any subsequent proceedings that may be necessary, as they are not liable, at the worst, to increase the risks the patient has to run, and they may possibly avert more serious operations. These failing, forceps Cæsarian section or craniotomy may be resorted to.

Schroeder, after examining the possible and probable dangers to mother and child, gives his ideas of treatment as follows:—

"The removal of the degenerated mass is chiefly to be recommended, which removal can be made much more easily and with less danger during pregnancy. Consequently, it is best to operate, when possible, a short time before the expected beginning of labor. If labor has begun, however, so much of the new growth is to be removed by the fingers or the sharp curette, or, if necessary, by cutting instruments, as will permit of the application of forceps or the performance of version. The Cæsarian section is to be practiced when the child is still alive and sufficient space cannot be procured for the application of forceps or the performance of version. In such cases the life of the child is of greater importance than that of the mother, because the latter isotherwise inevitably lost."

Spiegelberg thinks that "The difficulties which carcinoma uteri produces in labor, depend altogether upon the longitudinal and peripheric extent of the disease. When the degeneration is limited to the lips, and has left the angles free, so that in the cervical wall some dilatable portions still remain the difficulties may wholly fail, dilatation and expulsion proceeding undisturbed.

"When the whole os, as well as the vaginal portion, is involved, the upper and larger part of the cervix becomes dilated, but the ring produces an obstinate resistance. It becomes, under the pressure of the child, somewhat wider, but still unsufficiently so; is broken through, destroyed, or a metritis is developed, which, as a rule, diminishes the expulsive power. As a rule, the expulsion occurs rapidly and the consequent necrosis hastens the lethal termination, unless the absorption of the products of decomposition brings on puerperal septicæmia. He recommends dilatations by the rubber bags or the making of incisions into the infiltrated portions. When these are insufficient, the child must be extracted with forceps if living, or by craniotomy if dead. The incisions are liable to a further tearing into the tissues—how far, it is impossible to foretell."

Scanzoni says: "It is a most dangerous complication of labor. When the infiltration is not too great, the birth may occur naturally from dilatation of the healthy portion. Women with cervical carcinoma, as a rule, are attacked by a virulent form of puerperal fever and generally die. The prognosis for the child is very bad."

Herman, after assenting to the principles of treatment before enumerated, says, that, in his experience, delivery by forceps, when dilatation has progressed far enough, is preferable to version.

Leishman, Cohnstein, Meadows, Cazeaux, Ramsbotham, Bedford and other obstetric writers say what practically amounts to the same thing. The older writers, however, say less upon the subject than the later, and give greater preference to the Cæsarian section.

Now, a great deal of the uncertainty manifested by them has given place to more confident and scientific methods of procedure, as is attested by the following cases reported in brief.

Frommel reports a case of Schroeder's in the Berlin clinic, where, the child being dead, the operator broke away large pieces of the growth with his hands, and delivered by version. The patient was discharged in ten days, and subsequently died.

Dr. Fordyce Barker had three cases of spontaneous delivery, in all of which the mother survived the puerperal period. These are very exceptional, however.

Herman collected ten cases, in which the disease was removed during pregnancy. In one case, it was at the end of the first month. The patient went to term, but the disease returned before delivery.

One case, operated in second month, went to term; easy labor; four cases operated on about fifth month: one aborted the day following; one went to about seven and one-half months; two went to term. All recovered well.



One case operated on at six month, Douglas' cul-de-sac being opened; aborted eleven days after; child died.

One case operated on seventh month; labor one week later.

One case operated on at eighth month; dead child born eight days after.

One operated near the end of pregnancy; labor followed in five days.

Puchelt collected 27 cases, in which 5 mothers died during labor, 9 shortly after labor, 10 recovered, and the history of the remaining 8 is unknown.

Scanzoni had 7 cases: 4 died during labor from hemorrhage; 3 a few days later from puerperal fever. All the children were born dead.

Cohnstein collected 134 cases, and finds that, "Of 127 cases, the anterior lip was involved 13 times; the posterior lip, 7 times; the os externum, 23 times; the side of the cervix, once; the whole of the cervix 85 times.

"In 100 births, 68 occurred at term, premature birth or abortion occurred in 30; 2 cases of delayed labor; one at ten and one-half, the other at seventeen months.

"Of 126 mothers, 54, or 42.9 per cent., recovered from labor: 72, or 57.1 per cent., died in labor or soon after.

"Of the 72, 54 died at term, 38 after delivery, and 16 undelivered.

"The exact time of death of 51 is known: 31 during, or immediately after, labor; 2 each on the first, second, fourth, fifth, and twenty-first days; 5 times on the third day; once each on the sixth, seventh, eighth, fourteenth and eighteenth days.

"Of those mothers who lived, it is known that 18 lived from four weeks to six months; and 1 each, eight and ten and one-half months; and 1 each, two and four years.

To recapitulate, it would appear, in the light of the best authorities, that the plan of treatment may be thus tabulated:

1. When the disease is not too extensive, it should be removed early in pregnancy.

2. When the disease is extensive, it should be removed near or at the time of labor.

3. "When this cannot be done, the safety of the mother is best consulted by bringing the pregnancy to an end as soon as possible."—(*Herman*.)

4. When labor has come on, expansion of the os should be aided by numerous small incisions in its circumference, and the use of rubber dilators.

5. Dilatation of the os being in progress, and uterine action is not sufficient to force the head through the cervical canal, forceps or version may be resorted to.

6. When dilatation cannot take place after removal of the diseased tissues, the incision of the os and use of dilators, either from the size of the tumor or rigidity of the tissues, Cæsarian section should be done.

#### THE DIAGNOSIS OF PREGNANCY.

From the Proceedings of the *Ob. Soc. of Boston*.—Dr. Green read the report of a case which had presented unusual difficulties of diagnosis, the report having been prepared by Mr. H. S. Durand, of the Harvard Medical School, who had immediate care of the patient. The case may be briefly summarized as follows:—A negress, forty-three years of age, applied at the Boston Lying-in Hospital for out-patient attendance in her seventeenth labor. As the woman believed herself to be pregnant, and gave all the rational signs of pregnancy, no physical examination was made until the element of time came in to throw doubts on the assumed diagnosis. The woman was sure, however, that she felt vigorous fetal movements, and there had been a progressive enlargement of the abdomen. A careful physical examination was now made, with the following result: The abdomen was symmetrically enlarged to the size of pregnancy at full term, and the umbilicus protruded somewhat. The breasts were large and secreted a watery fluid. The abdominal wall was very thick. Percussion gave tympanitic resonance over the sides and to a less degree in front, but no more than might be expected from intestines distended with gas lying over the gravid uterus. On palpation no well-

defined uterine tumor could be made out; but movements resembling those of the fœtus in utero were very well marked. The fœtal heart was not heard; but the supposed fœtal movements were very audible through the stethoscope. Thus far the physical examination threw no improbability on the diagnosis of pregnancy; but examination per vaginam revealed a cervix in no degree softened, and it was decided that the woman was in all probability not pregnant, unless still in the early months. Dr. W. L. Richardson kindly saw the case with Dr. Green, and agreed that the condition of the cervix ruled out advanced pregnancy, although the peculiar pseudo-fœtal movements led him to examine the case with extreme care. As the patient objected to taking ether it was impossible at that time to determine the size of the uterus; but a course of carminatives and cathartics reduced the flatulent condition of the intestines and enabled Dr. Green to detect the fundus just above the symphysis pubis. A sound was then passed and the uterus shown to be of normal depth. It was then clear that the case was that of a woman who had passed the menopause, and who, being in vigorous health, has grown progressively obese. The peculiar movements were doubtless caused by a discharge of flatus from one coil of intestine to another.

Dr. Richardson said that the peculiar movements simulating fœtal motion made him hesitate in reaching an opinion: he had never felt such movements before, except in a case of pregnancy. His diagnosis was based, like Dr. Green's, on the vaginal examination: the condition of the cervix ruled out pregnancy, unless it was still in the early months.

Dr. Reynolds asked the opinion of members as to the value of bi-manual examination in diagnosing pregnancy in the early months.

Dr. Chadwick said he could usually detect pregnancy at the third month and sometimes at the second month by the bi-manual examination. He introduced his index finger into the anterior cul-de sac and his second finger into the posterior cul de-sac, and depressed the uterus with his other hand: in this way he made out the axes of the uterus and from their relative changes formed his opinion, aided by his appreciation of the consistency, mobility and weight of the organ. In the early months the uterus has usually a certain globular shape, which differs from the form of a uterus enlarged by a fibroid. In cases in which the uterus is retroverted and he is able to replace it, if it fails to retrovert in a week, he assumes the woman to be pregnant, even if the uterus is not sufficiently enlarged to enable him to judge by its size.

Dr. Richardson said he believed that the ease of making a bi-manual examination and the accuracy of its results were greatly enhanced by having the patient lie on her back with her legs extended, whereby the abdominal muscles are relaxed: if the patient draws up the legs and rests the heels on the bed or table, she instinctively supports herself in a manner with her heels and thus renders the abdominal muscles tense.

Dr. F. H. Davenport said that in the majority of cases he was able to determine the existence of pregnancy by the bi-manual examination at the third month, and in many cases at the second month. This was much easier when the patient had been under treatment before, and the size of her uterus was known. When that was the case a very slight increase in size could be readily made out. He thought that an increase in the thickness of the uterus antero-posteriorly, was the first thing noticed, rather than an increase in the length. In the early months the examining finger feels the body of the uterus through the vaginal cul-de-sac in every direction more easily, and can make out the more globular form. There is also a peculiar elastic feel to the body of the pregnant uterus which is characteristic. It is difficult to describe, but is easily recognized after some experience. It is probably the same sign which has been observed by some Continental writers and spoken of as a softening of the lower segment of the uterus.

Dr. Strong said he felt very sure that pregnancy existed when he detected the peculiar, elastic resistance without a sense of fluctuation.

Dr. Green spoke of the importance of being able to recognize by vaginal examination the existence of pregnancy in the early months in hospital cases and others, in which corroborative evidence, known only to the patient, is

purposely withheld from the physician in the hope that his manipulations, or local treatment of some genito-uterine affection, may produce abortion.

Dr. C. E. Stedman asked how much value was to be attached to the violet color of the introitus in the diagnosis of pregnancy.

Dr. Chadwick said the peculiar violet tint was of great value as a diagnostic symptom when it was present; but its absence did not, of course, exclude pregnancy.

Dr. Richardson had seen the blue color in women who had borne many children.

Dr. Chadwick said the blue coloration of the pluripara was of a different tint and was differently distributed. He had seen the blue coloration to which Dr. Richardson had reference in cases after excessive coitus. The peculiar violet tint, which he thought was of value in the diagnosis of pregnancy, was of deepest intensity, or perhaps only perceptible, on either side of and behind the meatus.

### PROTECTION OF THE PERINEUM.

By THAD. E. REAMY, M.D., Cincinnati, Prof. of Obs. Med. Coll. of Ohio.

From the proceedings of the *Amer. Gyn. Soc.*, 1885.—This method is to be recommended only in *primipara* and other subjects where the structures are likely to be greatly imperiled.

The woman may take a lateral or dorsal decubitus at pleasure during the early part of the second stage of labor. Indeed, she may not be required to lie down during the early part of the second stage of labor. When the head begins to bulge the perineum and its distension is such as to indicate peril to its attenuated structures, place the patient on her back across the bed, with her nates brought to the verge. Flex the thighs upon the abdomen and the legs upon the thighs, with the knees brought *close together*, and held in this position by two assistants. A towel or bandage of linen about ten inches wide and forty or fifty inches long is carried around the buttocks of the patient, and spread out smoothly with its anterior or upper edge on a level with the fourchette and given to these two assistants. They are then instructed to make traction during the pains in such an amount, in such direction, and with such part of the bandage as the accoucheur may direct. The direction of the traction may be varied at will from downward and backward to an upward and forward movement.

As anatomical and mechanical reasons for this method may be given the recent investigation of Ramsey, D. Berry Hart, and Savage, which tend to overthrow the prevailing views concerning the muscles of the perineum. It has been very generally held that the vagina had a proper sphincter which was in relation to the sphincter ani by a figure of eight continuation, and that just back of the fossa navicularis there was a muscular commissure in the centre of the floor of the perineal body, which also gave attachments to the transversi perinei muscles. It now seems well established that there is no such fortunate decussation just behind the fourchette, for if there were, this would be the strongest point of the perineum and not the weakest, as is shown by the clinical evidence of the frequent rupture at this point.

By the method under consideration, if the traction be made on the anterior zone of the towel the sinciput is held back and flexion is retained. This plan exerts complete control of the direction of the head, and does not interfere with the use of the forceps, or the employment of episiotomy. This plan substantially secures the same end that is reached in hooking the perineum downward and forward by Goodell's method, while the presence of the fingers in the rectum is avoided. Since the support is so equally distributed, there is not that perilous excitation of expulsive efforts through reflex stimulation, caused by the localized partial and unequal pressure made by the bare hand. The support should be continued until the shoulder has passed the vulvar opening. This method does not interfere with the use of the forceps.

### TRE INDUCTION OF PREMATURE LABOR IN ECLAMPSIA.

From the *Maryland Med. Jour.* (Editorial), Nov. 14, 1885.—Since the various modern methods of inducing premature labor have been brought into practice the arguments against this procedure are not urged with such force as in former times. In fact the induction of premature labor is regarded by all of the best obstetric authorities not only as a legitimate but as a necessary procedure when the indications calling for its practice are clearly present. Indeed, it seems to us that the obstetrician who fails to recognize the value of this procedure in certain cases, and therefore fails to practice the operation in the interest of both mother and child is at fault, and is robbing his patients of an intelligent measure of relief.

It has been clearly shown that eclampsia is dependent upon gestation. The question therefore arises in every case of eclampsia whether gestation shall be interrupted. This question is frequently solved by nature, for in a certain number of cases labor comes on spontaneously, thus illustrating the fact that the abortion is a conservative process intended to relieve the system of an over-taxed condition. When abortions take place in a spontaneous way the strain upon the patient's nervous system is frequently relieved and the convulsive action ceases. Whilst premature delivery, thus induced by the spontaneous efforts of nature, exercises a most favorable influence upon the nervous tension, which is a cause of the convulsive seizures, it is a well-known fact that nature is often too slow in her action and does not play her rôle as promptly as the safety of the patient demands. She gives the physician a clue to the most rational course of treatment in a certain number of cases without actually performing her duty. It then clearly becomes the duty of the obstetrician to carry into effect the temporizing policy before the opportunity of rescuing the patient from imminent peril may escape. We, therefore, think that in the policy which nature indicates, but does not always carry into effect, we have a most valuable and reliable suggestion as to the true course of treatment to be adopted in puerperal eclampsia. We do not by any means intend to lay down the broad statement that the induction of premature labor should be practiced in every case of eclampsia. On the contrary, we would insist upon the gravity of this procedure and advocate its postponement until all other methods of treatment have been carefully tried. When these have failed to ward off the impending danger, it then clearly becomes the duty of the obstetrician to employ the most natural means of averting the death of both mother and child. The induction of premature labor is not undertaken solely in the interest of the mother, still it presents to her a better promise of recovery than any other plan of treatment which has been suggested when she is threatened with permanent damage to her kidneys. After gestation has reached seven months the procedure is clearly indicated in the interest of the child, and it should not be postponed until the mother is nearly moribund before it is practiced.

The shock attending the operation for the induction of premature labor has been urged as an argument against its practice. In our opinion this condition has been unduly exaggerated. Statistics do not show that the shock of the procedure is as unfavorable to the condition of the mother at the procrastination until her powers are worn out by repeated convulsive seizures and profound toxæmia.

### ELECTRICITY IN OBSTETRICS.

By W. T. BAIRD, M.D., Albany, Texas.

From the *Courier-Record of Medicine*:—I found the cervix elongated to an extent which I had never before discovered in one at term, and this elongated portion projecting into the vagina, and containing the presenting part of the vertex. The os was thick, yet firm and rigid, feeling more to the touch like cartilage, than the tissue belonging to the os uteri. The pains thus far had produced no effect upon the dilatation, as it was still a "pin-hole os." \* \* \*

I made an application of the faradic current, passing the current through her body from the lumbo-sacral region to the abdominal region, continuously for a period of thirty minutes. At the end of this time her rythmical pains were much less severe, and she was enjoying refreshing rest in the intervals.

I now withheld the current for about six hours (when the pains again became harrassing in the intervals of regular contraction) and then repeated the application with the same result. In this way I managed to secure her a sufficient amount of immunity from suffering to prevent any exhaustion for twenty-four hours, and in the time thus gained the os became softer and began to yield. At this time the contractions were beginning to exhibit a greater degree of force, and the pain resulting from them was proportionately greater; therefore the more effectually to control this pain, and to assist the uterus to perform its expulsive efforts with the expenditure of a *minimum amount of nervous force*: and to facilitate the labor; to prevent exhaustion by securing perfect rest in the intervals of uterine contraction; to secure the speedy termination of the third stage of the labor; and, after this, to maintain the uterus in a state of *tonic contraction*, and thus prevent post partum hemorrhage; to successfully meet all these indications, *I now, from this time on, to the conclusion of her labor, applied the current during the time occupied by each recurring rythmical uterine contraction.* And I may here state that each indication as above set forth was promptly met and as promptly fulfilled.

The object of the above report is to exhibit the claims of electricity as a therapeutic agent of inestimable value in obstetrical cases.

1. As a sedative, allaying all reflex pain, such as "pain in the back," flying, darting, shooting, cutting or grinding pains in the abdominal region, and *modifying to a sensible degree*, the pain attendant upon the regular uterine contraction.

2. As a stimulant to all the muscular fibres engaged in the parturient effort, stimulating them to *contraction*, which has at this time become with them a *special function*, and thus bearing directly on the rapidity of the dilatation of the os, and the expulsion of the fœtus and placenta, securing firm and tonic contraction subsequent to labor, thus preventing post partum hemorrhage and promptly expelling all coagula and lochial fluids before decomposition of them occurs in the uterus, thereby preventing septicemia and facilitating involution.

3. As a tonic, exhibiting refreshing and restorative effects, thus preventing fatigue and exhaustion, *thereby forestalling all indications for the necessity of forcible delivery*, furnishing to all of her nerve centres, and to every nerve, and to every muscular fibre engaged in the labor, both voluntary and involuntary, a *new force*, a force which is not a part of her own system, though so nearly allied to her own nervous forces, that it accomplishes the work set apart for them, independent (almost) of their presence in her nerve centres, leaving the supply in them unimpaired and unexhausted, free to exhibit and maintain its refreshing and restorative influence on her organism, and thus to secure to her a condition of *rest*, which exerts its beneficent influence throughout her entire convalescence.

## THE PROPER MISSION OF THE OBSTETRIC FORCEPS.

By S. F. STARLEY, M.D., of Tyler, Texas, Ex-President Texas State Medical Association.

From *Daniel's Texas Med. Jour.*, Oct., 1885.—The indications for delivery with the forceps are more numerous than would be inferred from a perusal of the works of most authors on this subject. Prof. Maugha, one of the ablest obstetric teachers in the United States, gives the following as the most common of the conditions requiring their employment:

"1st. Prolapse of the cord. 2d. Hemorrhage. 3d. Convulsions. 4th. Large head. 5th. Contracted pelvis. 6th. Unfavorable positions. 7th. Rigidity of os uteri. 8th. Rigidity of perineum. 9th. Feeble or ineffectual uterine contractions."

These constitute the more frequent indications, and some one of them is generally found to be the cause of delay and danger to both mother and child, and in each of them, and the complications growing out of them, the forceps is the safest and most speedy means of relief at our command.

Prof. Maughs, speaking of rigidity of the perineum, and the delay and danger so frequently consequent upon that cause, says: "Of course, if delay occurs, here the forceps should be used—not after waiting until the head has rested immovably upon the perineum for six hours, as taught by Denman. Wait not six hours, nor one hour, but resort to the forceps as soon as it is manifest the head is not advancing, or, if advancing, doing so so slowly that it is evident the woman and child might suffer from unnecessary delay. Experience has taught what a *priori* might be inferred—that delays, at this point, are extremely dangerous to mother and child; dangerous to the mother because of the exceeding sensitiveness of the parts upon which the pressure is exercised; dangerous to the child because at this time it is mostly out of the womb which is correspondingly contracted, interrupting the placental circulation. And to permit the occurrence of unnecessary delay here, would also be, the less excusable, as the merest tyro can apply the forceps at this point without difficulty or danger; and yet under the waiting-on-the-resources-of-nature doctrine thousands of women have been permitted to endure the tortures of this condition for many weary hours, until their offspring had perished and their own lives endangered or sacrificed, when they could have been safely delivered in ten minutes. *O, tempora; O, mores!* Is the wail of the helpless woman of no moment? Of all our race are her sufferings alone to be disregarded, because, forsooth, there is some physiology in her sufferings?"

Then, speaking of feeble uterine contractions, the same learned teacher continues: "This is, perhaps, of all others, the most frequent cause of delay in labor, protracted second stage of labor through which the unfortunate, unaided woman drags through weary hours or days in fruitless effort to deliver herself, until the child is dead, and the mother in a hardly less unfortunate condition. In these cases the forceps reaches its highest triumph, and to withhold it, is a sin against God and humanity."

"When the gross clouds of ignorance, that have heretofore darkened our art, shall have given away to a knowledge of the mechanism of labor, the dangers of delay, and the ready and safe means of relief by making the forceps a blessing instead of a mockery to parturient women, such cases, with their dire consequences, will be unknown."

Speaking of its benefits and dangers, he says: "As it is the most conservative of obstetrical operations, always intended to benefit the mother and child, if this be living at the time, its dangers might almost be left out of the question, as its use necessarily involves absolutely no danger at all, except in the hands of the rash and ignorant, and such should never be at the bedside of the lying-in woman, and should they unfortunately get there, are as likely to do mischief without, as with the forceps." "Consequently as we are not talking to or writing for either the rash or ignorant, but to an educated profession where all are alike conscientious, and more or less skilled in the use of forceps, we may, as before stated, readily leave out its supposed or possible dangers—dangers far more *in posse* than *in esse*. And yet this is a very talisman for the trusting owls who have heretofore sat for hours by the bedside of a delicate, sensitive, helpless, suffering woman, in the agonies of an unavailing labor, without giving her the unspeakable benefits of a speedy, safe and easy delivery by the forceps. Such a one may possibly console himself with the so oft repeated caveat for ignorance that "meddlesome midwifery is bad." So it is, but the indecision and hesitancy of fools is worse.

"But has it come to this, that the accoucheur is the only one of our divine profession who utterly ignores our lofty mission which is to save life and alleviate human suffering? And is her life and that of her unborn child of such non-importance that we are to turn a deaf ear to her prayer for help?" "The opponents of the early and frequent use of the forceps refer with seeming triumph to the fact that in British midwifery practice one woman in every twenty deliveries with the forceps died; of course they did. They

died, not because they were delivered with the forceps, but as we shall incontestably show, because they were not delivered earlier; they died because, through a slavish adherence to the authority of those whose ignorance and want of skill,—Denman & Co. should have prevented their ever being consulted, their labor was allowed to linger on until fatal inflammations were lighted up. They died because their blood was poisoned by the absorption of decomposed secretions from the heated inflamed genital tract; they died because their exhausted vital forces were no longer able to bear up under the long continued depression of an unavailing labor. They died because of shock to heart and brain, caused by withholding the relief that should have been extended to a very dog!

"These opponents, with like seeming triumph, refer to the fact that one in every four or five of the children so delivered also perish. Of course they too perished, not because they were delivered with the forceps, but because the accursed doctrine of Denman withheld the life saving forceps until the children were already dead, or in a dying condition. Had the forceps been used as it should have been, hours before, the children and mothers might all have lived. The death of all these mothers and children is justly chargeable, not to the forceps, but to its being withheld until too late. The cry of "meddlesome midwifery is bad" has been repeated from the days of Denman and Blundell to this, by every ignorant who has sat for hours by the side of a helpless woman permitting her to suffer in unavailing labor until her offspring was dead, and herself but little better. They died because the attending physician, through a criminal ignorance, was unable to give the necessary assistance, or, through blind adherence to an age of ignorance, he feared to do so, and remained trusting in the resources of nature long after these had shown themselves inadequate to safe delivery, then the long deferred assistance came too late."

#### ANALYSIS OF ONE HUNDRED CASES OF LABOR.

From the proceedings of the *Cincinnati Acad. of Med.*—Dr. E. S. McKee made the following report: The hour of the commencement of labor was a. m. in sixty-one cases, p. m. in thirty-nine cases, fifty-four in the night, and forty-six in the day. The liquor amnii was discharged on an average of two hours and twenty-five minutes before delivery. In no case were the membranes purposely ruptured; in two cases it was done accidentally. The placenta was expelled on an average of eleven minutes and fifteen seconds. Credé's method of expression was used in almost all of the cases. Average time in labor, thirteen hours and forty minutes. Presentations: Vertex of the 1st, eighty-five; vertex of the 2d, seven; vertex of the 3d, one; breech, five; transverse, two. One mother in the last stage of phthisis never recovered from the delivery. One child was born dead; two, born asphyxiated, were revived, but died. Fifty-three were males, forty-seven females. Fetal heart was listened to in forty cases; in thirty-five the pulsations numbered more than one hundred and thirty per minute; seventeen of these were males, eighteen were females; five cases numbered less than one hundred and thirty; four were males, one a female; primiparæ, fifty-three; multiparæ, forty-seven. Greatest number of children born to one woman, thirteen; eleven multiparæ reported twenty-eight still-births. There were four Irish mothers, one Swede, thirty-four English, eighteen Bohemian, two Hungarian, and forty-one German; forty were married, sixty unmarried; thirty-nine mothers nursed their children, and but two of them suffered from agalactia; the other sixty-one were separated from their children. The forceps were used but three times, once on account of an abbreviated antero-posterior diameter to the extent of one-fourth of an inch, and twice to hasten tedious delivery. They were applied once on the after-coming head, but were discarded, being of no service. Lacerations of the perineum to the first degree were not mentioned, being so common, and the notes on this subject being imperfect. Rupture to the second degree occurred in three cases; in two forceps were used, in one there was forcible extraction of the

after-coming head; epistotomy was done four times; support of the perineum was practiced in sixty-seven cases, including the fifty-three primiparæ; three ruptures to the second degree occurred. In sixty-one cases antiseptic midwifery was practiced to the letter; in thirty-nine no attention was paid to it whatever. These thirty-nine were delivered at their own homes in London; the sixty-one were in the Allgemeine Krankenhaus, in Vienna. Two light cases of puerperal fever occurred, and were among the Vienna cases; they both recovered.

### THE THIRD STAGE OF LABOR.

By an Old Practitioner.

From the *Medical Age*, Oct. 26, 1885.—Let me say a few words now on the management of the third stage of labor. The funis has been cut and the child, having received the necessary preliminary attention, is rolled in a woollen shawl and handed over to the nurse. The accoucheur now turns to the woman. But the placenta remains. If the woman were delivered in the position of all-fours the action of gravitation combining with the expulsive efforts of the uterus would, as in the case of quadrupeds, be sufficient to readily expel the mass. But being supine, intelligence must come to the aid of instinct, and therefore are we accoucheurs.

The well-being of the mother is closely dependent on the proper expulsion of the placenta, and in no stage of parturition are the accoucheur's services more valuable than in the third. The nurse should be at the bedside while the head is being expelled from the vulva, and should be instructed to press firmly with her hand, palm downward, over the uterus, and she should continue to thus press until the child is handed over to her keeping by the accoucheur. The latter having surrendered the child must now see to the after-birth. It is understood that he has given a teaspoonful of fluid extract of ergot just as the head is about to emerge. By the time he is ready to hand the child over, this dose has commenced to act, and the uterus is contracting firmly on its remaining contents. He now places his hand as he had instructed the nurse to place hers, over the uterus, and make firm pressure mixed with slight friction. After he has done this for a few minutes, he instructs the woman to brace her feet against the foot of the bed and make a strong expulsive effort. This should be repeated several times, should it be necessary. Under no circumstances should traction be made on the cord until the placenta has been extruded from the vagina. I attach great value to voluntary expulsive effort of the mother in the removal of the after-birth. It obviates the necessity (if it be a necessity ever) of needlesomeness on the part of the doctor. Associated with the firm, but gentle kneading pressure indicated, it is, in my opinion, preferable to Credé's method—i. e., the squeezing out of the placenta as one squeezes a pit out of a cherry. For several years I have given it the preference, and I find that the women prefer it.

The placenta having been removed all is not yet done. There is apt to remain in the uterus blood clots. These must be removed. The contractions of the uterus are not always sufficient to remove them and they remain to decompose, often times, and to cause septicæmia. I am of the opinion that this is the cause of puerperal fever in very many cases. To remove these clots the index and middle fingers should be carried up till the tips touch the fundus. A complete sweep of the cavity should then be made and all loose contents brought away. This act is beneficial not only in bringing these away, but also in stimulating the uterus to that firm contraction which is the best prophylactic of septicæmia. When I have succeeded in securing a hard, wooden-like feeling of the uterus, I have no apprehensions either of post partum flooding or a child-bed fever. I am of the opinion that the fact that I have never had a case of puerperal fever in my practice, is attributable to this precaution. It may be that this savors of the *post hoc ergo propter hoc*, but I do not think so.



The next thing is to remove the soiled clothing from under the woman, to place under her a folded sheet nicely warmed, and to apply the binder. I am aware that some "naturalists" discard the binder, but I believe it contributes very much to the comfort and well-being of the woman. It should be applied snugly, but not too tightly. More definite suggestions cannot well be given: Now a warm, dry napkin should be placed snugly up against the vulva. The woman is now cared for, and after the child has been washed it is placed on her arm, and she is left to lie down to pleasant dreams. So mote it always be.

### THE RELATION BETWEEN EPIDEMIC ERYSIPELAS AND PUERPERAL FEVER.

By J. E. JENNER, M.D., C.M., L.R.C.P.L., Picton, Ont.

From the *Canada Lancet*, Nov., 1885.—About the middle of the last century an epidemic of puerperal fever broke out in Paris, and an eminent French physician writing on the subject, stated that the puerperal fever then prevalent was an erysipelas of the peritoneum. But this view did not attract much attention for about a hundred years, when several English and American writers published, almost simultaneously, accounts of numerous epidemics as well as isolated cases of puerperal fever evidently traceable to erysipelatos inoculation, and now the intimate and reciprocal relationship existing between these two diseases is admitted by all authorities, the poison of either disease being capable under favorable circumstances of producing the other. Thus, puerperal women exposed to the poison of erysipelas are almost certain to contract puerperal fever, and their babes frequently die within a few days of erysipelas neonatorum. On the other hand, wounds dressed by a surgeon in attendance on puerperal fever patients, often take on an erysipelatous nature.

An instance which occurred in my own experience well illustrates the reciprocal relation between these two diseases. In April, 1884, I was called to see a woman who was "flowing badly." It was a miscarriage at the sixth month. She had lost considerable blood the day before and was still flowing pretty freely. Having a fair pulse and not manifesting symptoms of immediate collapse, I determined to remove the placenta at once, which could be felt protruding from the os and partly in the vagina. Being accustomed to taking stimulants freely, I gave her a glass of brandy and water, and inserting my hand into the vagina, detached the adherent portion of placenta by insinuating two fingers between it and the wall of the uterus. I had no difficulty in removing the placenta, and am satisfied that no portion of the secundines were left behind. The hæmorrhage ceased immediately; I gave her two grains of opium in powder and washed out the uterus with a two per cent. solution of carbolic acid, using at least two quarts, the water being as hot as my hand could bear it. There was neither hæmorrhage nor pain after this, save some intermittent after-pains. This was in the morning; about two o'clock that afternoon she had a marked chill, and when I saw her in the evening her temperature was 102.5° F. I again washed out the uterus and left two 10-gr. powders of quinine to be taken during the night. She had no pain whatever. The following morning I found her very restless and anxious about her condition, the features cold, pinched and bloodless, the expression haggard and anxious; temp. 104.5° F., pulse 140, resp. 48. There was profuse sweating, had been a rigor about an hour before, and the extremities were cold. She had all the symptoms of malignant puerperal fever, and died on the fifth day.

I was at the same time attending a case of phlegmonous erysipelas some miles away, and although I had taken the precaution to disinfect myself thoroughly and change my clothing, I believe I was the means of carrying the infection to my puerperal patient. She had miscarried on several occasions before. On the evening after her funeral two of her children, a boy æt. 13 years and a girl æt. 6 years, were suddenly attacked with vomiting, sore throat and headache. I saw them on the day following and pronounced

them both cases of scarlatina. The next day the rash covered the body, and there was then no doubt as to the nature of the disease. Both patients did well on the simplest treatment, the type being a mild one, until they had reached the beginning of the fourth week, when the little girl manifested symptoms very similar to those which ushered in her recent illness. On the third day, I found the patient excited and tremulous, face flushed and swollen on one side; pulse 160, quick and full; temp. 104.5° F. She had intense headache and delirium at times, a dry, brown, tremulous tongue. The right ear has swollen to several times its normal size, and large blebs full of sero-purulent fluid were to be seen. The redness and swelling had spread well over the right side of the scalp and face, the right eye being swelled shut. The case was obviously one of cutaneous erysipelas of the head and face, the point of departure being doubtless an eczematous sore behind the ear. The inflammation extended over the head, face and neck, travelling over the entire trunk and down the extremities to the knees and elbows, where it stopped. The temperature ranged between 102° F. and 104° F., until the beginning of the fourth week, by the end of which it had subsided entirely, and the skin—after a thorough washing with soap and water—had resumed its natural color and appearance.

On the third day after I was called to see this patient, her brother, who had accompanied her through the attack of scarlatina, also developed erysipelas. In his case the eruption was confined to the mucous membrane of the nares, the bridge of the nose and the soft tissues below the eyes. It was perfectly symmetrical, and both nares were almost occluded for a time. His temperature ran up to 103° F. for a few days, with other constitutional symptoms of a mild type. In a week he was quite well.

REMARKS.—Since the mother's death these two children had slept in her bed with the father. None of the other members of the household had been thus exposed, and there were several small children in the house, among them a babe two months old, belonging to the housekeeper. None of these suffered from either disease. Though the bed-linen and coverlets had been washed and thoroughly cleansed after the mother's death, and the mattresses and pillows aired, I still think that both the scarlatina and erysipelas in these two children may have been due to infection from the puerperal fever poison, by sleeping in the same room and on the same bedding so soon after the mother's death. There were no other cases of erysipelas in the neighborhood, and although scarlatina had appeared in the school, neither myself nor any members of the family had been exposed to the disease. Many authorities believe a close relationship exists between scarlatina and puerperal fever, but whether this relationship be reciprocal or not, is, I think, not yet established.

It is laid down as a rule and taught in the schools, that when a practitioner has been unfortunate enough to get a case of genuine puerperal fever, he should at once give up his midwifery practice for a period of at least three weeks, and devote his attention in the meantime to daily ablutions until he is purified from the contaminating influence which attends him. Now if it be true, as it undoubtedly is, that the contagium of erysipelas is capable of developing into a puerperal woman genuine puerperal fever—and indeed the opinion is prevalent among the French that every case of puerperal fever is an erysipelalous inflammation of the peritoneum—it follows that during epidemics of erysipelas the practice of midwifery must be relegated entirely to inexperienced women—technically called midwives. There is no doubt that the doctor assumes some risk in attending the lying-in chamber while being daily exposed to the virus of erysipelas; still I believe it is quite possible for the accoucheur to so thoroughly disinfect himself, as to guard effectually against the danger of communicating such specific poison to his patient. During the past spring an epidemic of erysipelas spread over this district and several deaths from it, as well as from puerperal fever, were reported.

I continued my midwifery practice as usual, although I was at the time in daily attendance on cases of erysipelas, some of which were of the phlegmonous variety. I adopted a rigid system of disinfection daily, taking a

general bath after returning from my erysipelas patients, sponging the body—especially the hair and whiskers—with a carbolic lotion, using carbolic acid freely in the lying-in room; never wearing clothes that had been exposed to any infectious diseases. I handled my patients as little as possible, and used as a lubricant, carbolized tallow softened with turpentine. My precautions may have been overdrawn, but I had the satisfaction of seeing all my patients do well, not one of the twelve I attended during the epidemic manifesting any symptoms of septic poisoning.

### PUERPERAL SEPTICÆMIA.

Dr. GEORGE T. HARRISON, of New York, in a paper read before the *Med. Soc. of Va. (N. Y. Med. Jour.)* says that without a wound somewhere along the genital tract puerperal septicæmia does not exist. If a puerperal wound is protected from external influences it will heal like a wound on the surface of the body. In puerperal fever the carriers of infection were either the pathogenous fungi which generate traumatic diphtheria, pyæmia, and septicæmia, or they are putrefactive germs. The latter are ubiquitous; the former are imported and get to the puerperal woman by the hands, instruments, cloths, etc., that may be used about the genitals. They are derived from suppurating surgical wounds, cadaveric poisons, and especially lochial discharges of women suffering with septic infection. A minimum quantity infects in the effective manner. The lochial discharges of puerperal sick during an epidemic are so infectious that they endanger life, by infection, of the non-puerperal woman to the pregnant, to physicians, and gynæcological cases where operations have been performed. In the puerperal woman the conditions for the rapid development of pathogenous fungi were most favorable. Contrary to general opinion, Gusserow has shown that there is no connection between puerperal sepsis and erysipelas, and that the micrococci of erysipelas can not produce pathological changes identical with septic processes. The pathogenous fungi affect the organism immediately, while putrefactive germs do so indirectly by their influence on decomposable matters, always present in puerperal women. An autogenous or autochthonous infection is an impossible thing. The characteristic features of non-pathogenous affection are: (1) the late appearance of the fever, (2) the slight participation of the general condition, and (3) the existence of local morbid substrata. The principles of prophylactic treatment consist in pure air for the lying-in woman, the careful avoidance of introduction of infectious matter into the genital passages, and the thorough disinfection of the genital tract. The physician's and the midwife's hands, instruments, etc., should be disinfected before using about a puerperal woman. Disinfection must be both mechanical and chemical. Use the finger-nail brush often, thoroughly washing the hands with soft soap, and then wash the hands again. Take off the coat and roll up shirt-sleeves. Then dip the hands and forearms in a disinfectant solution. Instruments and cloths should be dipped in about a five-per-cent. solution of carbolic acid for several minutes. During the pregnancy, especially if there be any puerperal-fever epidemic, the woman should frequently wash her external genitals with soap and water, and afterward with boric-acid solution. When labor has set in, Dr. Thomas advises her to use a warm vaginal injection of antiseptic character, but Dr. Harrison protests against the injection under ordinary circumstances, as such injections are unnecessary and fraught with danger. They remove the mucus which renders the vagina soft and pliable, and most of the disinfectants used, especially carbolic acid and mercuric bichloride, coagulate the mucus and irritate the surface of the vagina. The bacteria naturally found in the vagina are not dangerous. But, if the patient has been subjected to the possibility of septic infection during the birth, then it would be eminently proper to use a copious antiseptic vaginal douche immediately after the birth and during the rest of the puerperal state. In tedious and complicated labors, where frequent examinations has to be made or instruments used, infections are absolutely indicated. Some-

times putrefactive decomposition of the uterine secretions occur before labor ended. In such cases, complete the labor as speedily as possible, and thoroughly disinfect the genital tract by intra-uterine injections of carbolic acid or mercuric bichloride. Wash the external genitals three or four times daily, and disinfect once a day by carbolic acid or mercuric-chloride solution. Close all lacerations of the perinæum and vagina under strict antiseptic precautions, as by the continuous catgut suture. Iodoform dusted over the raw surface favors union. A powerful contraction and retraction of the uterus greatly helps in securing immunity from invasion of putrefactive bacteria; hence the value of Credé's method in expelling the placenta.

### THE PUERPERAL FEVERS.

In an editorial article (*Medical News*), reviewing Barnes' second volume of *Obstetric Medicine and Surgery*, the writer directs attention to the fact that this author recognizes four puerperal fevers: (1) simple endosepsis of two varieties; (2) autosepsis which may be grafted upon endosepsis; (3) exosepsis, a compound of all three.

According to Dr. Barnes, endosepsis produces fever possessing little or no infective property; autosepsis and exosepsis are highly infective. Might not this statement be given another form. Mild cases of puerperal septicæmia are not as contagious as the grave ones. And, further, if autosepsis and exosepsis are highly infective, is it not rational to believe that their essential cause is one? Nay, take all the different varieties of sepsis, those with little, as well as those with great infective power, do they not point to unity of cause?

One thing we are especially glad to see in Dr. Barnes' exposition of the puerperal fevers, is that he denies the existence of simple traumatic fever, which is given such an important place by the German obstetric writers especially, among whom we may mention Kleinwächter.

In the course of the article in relation to etiology, Dr. Barnes says: "Everything is prepared for inflammation. The local injury, the hyperinot blood charged with effete matter, are there; an exciting cause is alone wanting. A chill is sufficient." But is the chill of puerperal septicæmia cause or consequence? While it occurs in the great majority of cases, most authorities regard it as an indication that infection has already occurred, it is the first manifestation, not the cause of the fever: it is the cry of alarm, the signal of distress.

Several questions are suggested by Dr. Barnes' opinions as to the etiology of the puerperal fevers. For example, if protracted labor produces endosepsis, why do so many primiparæ escape? They have muscular and nervous exhaustion in most cases, yet it is altogether exceptional for them to have septicæmia; a common cause ought to produce its effect in the majority, instead of in a very small minority of cases. Again, may it not be that the necrosed tissue of the genital canal, or the decomposing clot, or placental fragment in the uterus furnishes merely the nidus in which the germ-poisons entering from the exterior are developed? Would it not be quite as rational instead of having so many varieties of sepsis explaining the mild and grave cases of the disease, to hold that the susceptibility to the poison differs, in different subjects, or that the quantity and quality of the poison vary? No one doubts the unity of the scarlet fever poison, and yet how various its manifestations in different subjects and in different epidemics. In the one case there is variety in the individual constitution, and in the other in that of the poison, though it is continually the same.

It is probable that all varieties of puerperal septicæmia depend upon one cause: this opinion rests in part upon analogy, in part upon the clinical history of the disease, and in part upon experiments made upon animals. That this cause is a *contagium vivum* is also probable from the rapidity of development of the poison—life can only explain such rapid evolution and multipli-

cation. The remarkable results obtained, both in the prophylaxis and in the cure of puerperal septicæmia, by the use of antiseptics—the most efficient germicides being the most useful—tend to confirm this conclusion. Finally, this view is in conformity with much that science has taught us in regard to several other diseases which have been proved to be caused by living germs.

Rather than accept Dr. Barnes' quadrilateral septicæmia, we would prefer adopting the creed of Siredey: "We do not believe in *autoinfection* of the puerpera. For us all alterations are due to hetero-infection, and the constancy of the uterine lesions, and of their primordial appearance, leads us to regard the genital wound as the exclusive seat of the inoculation."

### HEMORRHAGE AFTER ABORTION.

By S. S. MURRAY, M.D., Thorndale, Ont.

From the *Canada Lancet*.—In summing up, we are to bear in mind that we are not dealing with natural labor. The generative organs are not prepared for the strain that is put upon them. In a perfectly natural labor, the coagulating process is completed before nature is prepared to safely part with the placenta, or even manifests a disposition to expel it. The formation and presence of coagula, first in the placenta and then in the uterine sinuses, are the very agents that normally excite uterine contractions, and thus effect the expulsion of the placenta. In an abortion, on the other hand, the uterine muscular fibres are not developed, or very imperfectly, and being unable to perform their functions, the placenta is not expelled. In the normal state the placenta acts as an irritant, the uterus contracts upon it, thus forming a tampon; the contractions cut off the blood supply from the placenta, and it in turn tampons the uterine sinuses until the coagulum is formed in them. The blood thus cut off from the placenta goes to nourish the muscular fibres of the uterus, and in a little time they are strong enough to throw out the now unnecessary placenta. In a normal labor we ought to wait for from twenty minutes to one hour, until the coagulation process is completed. But in the cases we are considering, would waiting be of any service? At the end of three or four hours, or as many days, we find the placenta as adherent as ever, unless (as is commonly the case) it has become partially separated, which fact is indicated by hæmorrhage; or we have the other condition, that of septicæmia. Playfair says, "that the one great primary cause of post-partum hæmorrhage is inertia." Therefore, to overcome the inertia, we should give ergot; then, in order to give time to act, plug the vagina, on removing which we very frequently find the placenta comes away with it. In case 5, the removal of the cause stopped the hæmorrhage. Dr. Parish mentions a case of uterine hæmorrhage of three weeks, following a miscarriage at third month, cured by scraping with the wire curette, which simply brought away some granular matter. The application of the tampon is of great importance, as the pressure of the cotton on the uterus has a powerful effect. The best effects are obtained by not pressing each pellet of cotton too strongly, each one acting as an elastic ball; on removing these I have found them quite elastic after fourteen hours. The vaginal orifice should close over the filling.

Concerning ergot, I have not found the various fluid extracts to act as well as an infusion of the powdered drug. If the cervix should not dilate sufficiently after using the plug, we might dilate with a tupelo tent, sufficiently to allow us to use the wire curette. Hundreds of women are sacrificed to the let-alone policy; exhausting hæmorrhage or fatal septicæmia is almost sure to follow a retained placenta. Some of the causes of hæmorrhage are, hæmophilia, mental emotion, functional disease of the liver, incautious use of stimulants, sudden assumption of the erect position; the local causes, irregular and insufficient contractions of the uterus, clots, portions of the retained placenta or membrane, retroflexion, laceration or erosion of the cervix, vagina or vulva, lacerations of the cervix being more apt to occur in premature births.

## MILK-SICKNESS AND MALARIAL FEVER.

Dr. GEORGE SUTTON, of Aurora, Ind. (*Cincinnati Lancet and Clinic*) makes the following differential diagnosis:

In milk-sickness the attack is seldom accompanied with chills and the fever is generally continuous and of a low grade.

In milk-sickness there is nausea and vomiting and obstinate constipation which is a prominent symptom in the disease.

Milk-sickness in most instances is confined to small circumscribed localities, frequently occurring in situations exempt from malarial diseases and is seen only in the Western States.

Milk-sickness generally makes its appearance during those seasons when cattle are attacked or are dying with the disease known as trembles.

In milk-sickness small doses of castor oil, epsom salts, blisters over the stomach and enemas, are the remedies generally resorted to in the treatment of this disease, while quinine has but little effect.

Malarial fevers are generally preceded by chills and the fever is either of a remitting or intermitting character.

In malarial diseases there may be nausea and vomiting, but obstinate constipation is not remarkable.

Malarial diseases are seen on low flat ground or along the water courses all over the United States and in different parts of the world.

Malarial diseases prevail where there are no remarkable diseases amongst the cattle and they seem to have no connection with epizootics.

In malarial diseases quinine is the specific. Sometimes aided by emetics and cathartics.

For the last twenty years I have not heard of a well-marked case of milk-sickness in this section of the country where the disease was at one time so common, neither have I heard of cattle dying of the "trembles." The country has since been cleared, and the ground cultivated, and milk-sickness and the disease amongst the cattle known as trembles has entirely disappeared. This is additional evidence that the removal of the forests in many localities so far from being an evil is conducive to health.

## HOW CONCEPTION OCCURS.

By S. C. WEDDINGTON, M.D., Jonesboro, Ind.

From the *Indiana Med. Jour.*:—Our text-books teach that for conception to occur it is necessary for the spermatozoa of the male to reach and enter into the ovum of the female, and that in order to do so it is necessary for the spermatozoa to pass through the vagina and the uterus and sometimes through a Fallopian tube. They also tell us that such contact and penetration may occur within the uterus, within the tube or within the ovary.

This theory is well supported and seems to be accepted as settled; but to me it seems in many cases unreasonable and even impossible. I know that the theory is said to be founded on observation. Dr. Joseph Beck saw the os uteri open and reach down to imbibe the semen. Other observers have found spermatozoa in the uterus and in the tubes of animals. Barry, Meissner and others have seen spermatozoa within the external membrane of the ovule in rabbits; and according to Newport several spermatozoa enter the ovule (Playfair). It seems presumptuous to dispute the results of actual observation; yet, men have been mistaken in other matters; possibly in this. False facts are nearly as common as false theories and more apt to mislead.

Two other theories have been advanced.

One is that the spermatozoa are absorbed or taken up by the blood-vessels or lymphatics and reach the ovum through the circulation.

The other is that the act of conception is some sort of a spiritual union and reproduction; a new soul being formed, which builds for itself a body.

The first of these seems to me to be the most reasonable and, probably, the true theory. The common theory appears untenable for the following reasons:

1. The os uteri is sometimes found, at the time of labor, to be completely closed—grown up—(Playfair). It is inferred that this condition must have occurred after conception, but I think it has not been proven. It may have occurred before.

2. Many cases of pregnancy have occurred without rupture of the hymen: the semen not having been thrown into the uterus or even into the vagina, but having come in contact only with the vulva. Tidy says a Dr. Burgess reported a case of pregnancy with a completely imperforate hymen; and that Dr. Gustav Braun reported three cases of pregnancy with unruptured but perforate hymens, and in one of them the urethra had taken the place of the vagina in copulations. In such cases we cannot think that the spermatozoa traveled through the *via uterinus*.

3. Standard authors agree that superfœtation sometimes occurs. Tidy says: "Making, however, all possible deductions, there remains a certain though small, residuum of case which it is difficult if not impossible to explain on any other supposition than that a second impregnation must have taken place during the time that the uterus contained a partially developed fœtus." The uterus during pregnancy is completely closed up; the fœtus and membranes not only filling it accurately but adhering to the inner surface. If the spermatozoas get to the ovum in this case they must get there in some other way than by going through the uterus.

4. The spermatozoa are without structure, force, will, volition, sense, sensation or knowledge. It certainly does not look reasonable that they could climb up through a tortuous way and pass through the membrane of the ovum, especially when we consider that the discharges and muscular action of the uterus, and the ciliary and peristaltic action of the Fallopian tubes would all act, constantly, against them.

It is said that the ovum may become fertilized within the uterus, within the tube, or within the ovary. This, I think, is a mistake. The corpus luteum of pregnancy appears much different and pursues a very different course from that which results from ovulation without conception. This difference is supposed to arise from the congested and excited condition of the parts; yet congestion and excitement are common in these parts, but do not, I believe, cause the corpus luteum of pregnancy, unless pregnancy has occurred. It is true that the corpus luteum of pregnancy is sometimes found when pregnancy does not exist; but this is easily explained on the supposition that the ovum has perished or has been swept away after being fertilized in the ovary. It does not seem probable that the zoosperms could enter the ova after they are detached and rolling through the tube or uterus. To me it seems much more reasonable that the ovum is always fertilized while in the ovary, if at all. There is nothing preposterous in the supposition that the spermatozoa may be absorbed or taken up from the uterus or the vagina or even the vulva. We know that absorption readily occurs in this region, from the readiness with which decomposed discharges, septic materials and medicines are absorbed; and doubtless larger bodies than spermatozoa often enter the circulation here.

#### THE LAWS OF MATERNITY.

From the *Med. and Surg. Reporter* (Editorial).—The natural laws that through nature's voice command a woman to nurse her offspring, have been frequently written upon, and from all time and from all men comes the injunction that where possible the mother is the best wet-nurse for her child.

That many mothers have imperfectly developed mammary glands, and that many are physiologically unable to secrete healthy milk, we all know, and we also know the reason. It is but necessary to walk about a large seaside hotel to find the explanation. On a "hop evening," we will see great numbers of children from seven (aye even from five) years of age upward dancing about until the hand on the clock registers 10, 10.30, and even 11 o'clock; when, worn out in body, they go to bed to repeat the same monstrous indiscretion on the first occasion that offers.

It is the diamond-decked, low-necked and fashionably-attired mothers, who sit admiringly by, their faces wreathed in smiles at the precocity of their youngsters, who are to be held accountable for the production of a race of non-nursing mothers. The constitutions of these "little women" are so undermined by their faulty rearing that they are utterly incapable, not only of nursing their offspring, but in many cases of conceiving and giving birth to children at all.

The productiveness of American women is on the decline, and cites statistics to prove his statement. Two causes are assigned for this. First, a physical and physiological disability, brought about by the same causes that negative the nursing function, and, secondly, the purposive interference with the function of conception.

In fashionable life this last course is undoubtedly very prevalent, and if we mistake not, is on the increase. It is not fashionable to have large families, and to those who only half realize the responsibilities they assume when they enter the married state, a large family is too much care and trouble.

The physical disability can, in the majority of cases, be avoided by the proper bringing up of our children; the purposive prevention can be removed only when human beings are content to live in accordance with the laws of nature, and are willing to throw the mandates of fashion to the winds. Expediency is sometimes urged as a reason for interfering with conception, as when a man is too poor to support a large family. This argument holds good when a man is unwilling to live according to his means.

The better class of Irish Catholics always manage to get along, and as a rule they have large families. For two reasons—they are industrious and frugal, they work hard, have good health and normal functions; their church looks with disfavor upon unnatural efforts to prevent conception, so much so that when a distinguished theologian was recently told that the question had been asked how the increase in the family could be checked by artificial means, and his opinion on the subject requested, answered, "Tell your questioner to go the devil and find out; he knows more about it than anyone else."

We have recently read of a woman in France who has given birth to twenty-six children, and who now at the age of 67 works in the field with her husband.

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#### EXTEMPORANEOUS EXAMINATION OF THE MILK OF WET-NURSES.

A ready method of ascertaining the character of human milk has not yet been found, unless an exception be made in favor of that of Dr. Paul Hélot, which we find published in the *Journal d'Accouchements* of August 15.

Hélot's method is based upon the proportion between an equal volume of distilled water and of milk; this proportion is 30 to 35, or more simply 6 to 7, that is, six drops of distilled water are equal to seven of milk. A milk having thirty-seven or even forty, gave a good result, but if it fell below thirty-three drops it possessed neither clinically nor physically the requisite qualities.

The milk is taken from the breast by a Pravaz syringe, the needle being removed, and the extremity carefully wiped; the milk should be taken about the middle of nursing, and that from each breast should be examined. The syringe is held vertically, the piston pushed slowly and gently down so that the milk escapes drop by drop, and the drops counted. Then an equal bulk of distilled water may be introduced into the syringe, and the drops counted, or this may be previously known, and a comparison made so as to learn whether the milk has its normal number of drops.—*Ed. Med. News.*



## DISEASES OF WOMEN.

## ANTEFLEXION OF THE UTERUS AND DYSMENORRHOEA.

By WILLIAM GOODELL, M.D., Prof. of Gynecology in the Univ. of Penn.

CLINICAL LECTURE (*Medical Bulletin*, Nov., 1885).—The next case is one of antelexion with dysmenorrhœa. I wish, in the beginning, to disabuse your mind of one error. Many text-books speak of antelexion as a pathological condition, and will show many forms of pessaries to be used in antelexion and anteversion. In the great majority of cases antelexion is not pathological. You will find in almost every unmarried woman that you examine the womb antelexed and resting on the bladder, for this is the natural position. The mistake made is this: A girl is overworked or overtaxed at school, and her health begins to fail, and one of the first symptoms of impairment of the nervous system is irritability of the bladder. This is one of the first nervous symptoms. Every one gets it. I have often referred to an illustration which is familiar to you all, and that is that at examination time you find that you are obliged to pass water more frequently than natural. Many a lawyer and many a clergyman is compelled to urinate before entering upon a case or before delivering a sermon. The same thing is seen in the lower animals. When an animal is greatly frightened the first thing it does is to empty the bladder. A nervous bladder is, as I have said, one of the earliest phenomena of nervousness. When a woman, who has been overworked, comes to a physician complaining of bearing-down feelings, back-ache, and other nervous symptoms, and he finds the fundus resting on the bladder, he at once jumps to the conclusion that the trouble is due to antelexion or anteversion, and thinks that he must use a pessary to overcome the difficulty. There is no antelexion pessary which accomplishes its object which does not press on the bladder on at least two places. Granting that such a pessary is the one to be used, few women can stand it. Antelexion, however, as I have said, is not a pathological condition in the majority of instances, and the vesical symptoms are not due to the pressure of the fundus of the uterus, but to a nervous bladder. There are exceptions to this rule. A fibroma may cause the womb to press on the bladder, or it may cause pressure on the bladder in front and on the rectum behind. Fortunately, the rectum rarely suffers from pressure on account of the protection afforded by the promontory of the sacrum.

If antelexion is the normal condition, what is the necessity of doing any operation in this case? We do it for the relief of the dysmenorrhœa. If a woman who has not borne children complains of painful menstruation, it is in the great majority of cases due to antelexion. This patient is twenty years old, has been married four years, and is sterile, and suffers greatly from dysmenorrhœa. The phenomena of a typical case of this kind is as follows: When menstruation begins, a few drops appear with a great deal of pain; the pain increases in severity until it reaches its acme, then there is a sudden gush of menstrual fluid with a temporary relief of pain. Gradually the pain again increases until it culminates with another expulsion. The meaning of this is that the bend in the neck of the womb prevents the menstrual fluid from escaping, and it collects in the cavity until the swelling causes the bend to straighten, and the menstrual fluid rushes out. There is then relief until the fluid again collects. This is stenosis from angulation. This is a condition which needs not a stem pessary or other kind of antelexion or anteversion pessary, but dilatation.

The operation in vogue a number of years ago, was the cutting or bloody operation. I shall not burden you with the details of this operation, for, thank God, it has fallen into disuse. It is an operation which has caused the death of many patients. By it, the stenosis was overcome by incision. The objections to this plan are, in the first place, the danger which attends it. Many cases have died from it, and one physician in New York states

that he knows of thirteen unreported cases. In the second place, it is not successful. In the majority of cases, the parts heal up and the dysmenorrhœa returns. In the third place, it deforms the cervix. The neck of the womb is cut through, and this sometimes is as objectionable as a natural laceration produced in labor.

The operation of forcible dilatation I have performed two hundred and eleven times for dysmenorrhœa and sterility. Including the cases in which the operation has been done for the purpose of exploring the cavity of the womb, I have done it over three hundred times. In these two hundred and eleven cases, I have never had peritonitis which caused any alarm. I have had soreness lasting for two or three days. If there is a fibroid tumor in the wall of the womb, it is well to be careful about dilating, for such a womb is a vulnerable womb and resents any injury. Some time ago, a patient was brought to me suffering excessively from dysmenorrhœa. At such times she was unable to pass water on account of the agonizing pain. This was, of course, reflex. She was compelled to take large quantities of morphia. I dilated the neck of the womb very successfully, but for ten or twelve days she suffered from uterine colic. There was no elevation of temperature, no tympanites, and no tenderness except over the womb, and I felt no alarm in regard to the case. My rule is to keep the patient in bed for two days. I used to occasionally perform the operation at my house and send the patient home in a carriage, and I have done it at the hospital and let the patient go home. My rule now is to give ether, and after the operation put the patient to bed and administer opium suppositories as may be needed. Usually two are enough.

In performing the operation I used an ordinary bivalve speculum to bring the cervix into view. Here we have an exceedingly small pin-hole os. A strong tenaculum is required to hold the cervix. To perform the operation to the best advantage two dilators are required, although one will answer most purposes. I begin with this small modified Ellinger's dilator, and catching hold of the cervix with a tenaculum, dilate the canal sufficiently to admit the second instrument. These dilators should be provided with shoulders to prevent their slipping into the uterus too far, and thus run the risk of tearing the fundus of the womb when the blades are expanded. Before introducing any instrument into the cavity of the uterus, I syringe the vagina with a solution of carbolic acid or permanganate of potassium. Having prepared the way with the smaller instruments, I now use this stronger dilator, which is made on the same principle as the Ellinger instrument, except that it is heavier. The blades have grooves cut in their outer surface to prevent slipping, and broad shoulders are placed at a scant two inches from the extremity.

This is a rough operation, and, it might be asked: Is there not danger of tearing the cervix? I have had this accident take place twice, and in both cases it was produced by the sudden slipping out of the instrument. In one of the cases the os was very brittle from the long continued use of nitrate of silver. In the second case the tear was about half an inch long, but no symptoms resulted from it.

This is a very successful operation. The patient may have pain at the next menstruation, because the parts may not have fully recovered from the rough usage to which they have been subjected, but at the second period I expect great relief. We shall instruct this patient to report to us if pregnancy occurs.

A girl may have ante flexion with somewhat painful menstruation. She marries and the dysmenorrhœa goes on increasing. Why? Because nature intended that a woman should become pregnant, and the sexual relations are of such a character that if pregnancy does not take place, hypertrophy of the parts occur. The same thing is seen in unmarried women; the dysmenorrhœa increases as the person grows older, because menstruation does not cease. Nature intended that these periodical congestions of the womb should be interrupted by pregnancy and lactation. If this does not occur there is hypertrophy of the mucous membrane of the uterus. If to the menstrual congestions be added the congestion from sexual intercourse, this

hypertrophy is greatly increased. The thickening of the mucous membrane of the canal prevents the free escape of the fluid, and in the efforts to force this out the muscular tissue of the uterus becomes hypertrophied.

This is an operation which I can recommend. In a great majority of cases it will cure the patient, and almost always do a great deal of good.

### AMENORRHOEA.

By A. J. C. SKENE, M.D., Prof. of Gynecology to the Long Island College and Post-Graduate School of New York.

From the *Medical News*.—In organic diseases, especially those of the liver, heart, lungs, or kidneys, in the advanced stages, we may look for derangements of menstruation. Amenorrhœa is naturally a consequence of hepatic or heart affections, but in renal disease the pathology is not as easy of explanation, as it is perhaps less mechanical than the former. I presume in amenorrhœa occurring from renal disease, that it is due more to malnutrition, tissue deterioration, and anæmia. The point, however, to which I specially call attention is the necessity for us to look well to the general organization in obscure cases, and seek there the causes of amenorrhœa, rather than in the pelvic organs themselves.

I would next call your attention to the management of amenorrhœa in chlorotic patients. This condition, known as chlorosis, presents that peculiar form of organization in which we have a partial arrest of the development of the circulatory apparatus and sexual system.

The consequence arising from this insufficient development is that amenorrhœa is the rule, as is also anæmia. In chlorosis especially, the blood-making organs are sluggish and defective; the heart action is feeble and easily gives out; they become tired easily on the least exertion. Such individuals cannot afford to menstruate, although they may do so under ordinary circumstances. But the moment you put a tax upon the system by which their vitality is used up in other channels, they become very anæmic, and amenorrhœa follows.

You will also find that these patients do not respond well to restoratives and tonics, as will any well-developed organization that is simply suffering from anæmia for the time being, because of this peculiarity of organization which I have just described. You give them iron and good nourishing diet, and they improve so slowly and fall back so often that you become almost discouraged. In these cases of chlorosis you will find the alterative tonics effect by far the most satisfactory results. You can, of course, never change the organization, or make a well-developed, ruddy, vigorous woman of such a patient. In these cases you will find iodine, in the form of iodide of iron, answers well; this, however, is better in the strumous diathesis. In these cases of chlorosis we find that small doses of mercury is one of the best possible tonics. I know that if you give from one-thirtieth to one-fiftieth of a grain of the bichloride to a chlorotic patient three or four times daily, she will improve under the treatment, especially if you add the chloride of iron.

We must also remember that in the chlorotic girl the nervous system is below par, which would indicate the administration of the chloride of arsenic. Such patients are likely to be very dyspeptic, indicating a lack of gastric juice, or its properties; hence, we administer hydrochloric acid. These remedies are contained in the mixture called "the four chlorides," viz., chloride of iron, chloride of arsenic, bichloride of mercury, and hydrochloric acid. Under this treatment it is surprising how these pale, greenish yellow-looking girls will improve; but you must continue it for some time in order to obtain the best possible results.

Some may ask, "Are you not afraid to give one-fortieth of a grain of the bichloride of mercury for a long time?" I have given it for two months regularly, and then stopped for one or two weeks, and then again continued it for one month longer, without any bad effects whatever ensuing. I have also known it to be given for a longer period than that with most marked beneficial results.

The rule is that amenorrhœa appears in the advanced stage of phthisis pulmonalis; when patients are in the third stage of the disease the menses become scanty, and finally cease altogether. But there are exceptions, and this case now before you well illustrates such a one. Where amenorrhœa occurs in the first stage of phthisis it seems to come simultaneously with the lung trouble. In this case it is evidently conservative; a patient with marked degeneration of the lungs suffers from impairment of the whole nutritive system; she cannot then afford to menstruate.

The cause here is organic disease of the respiratory organs, and until that is removed we can do nothing in the way of treatment for her amenorrhœa. I insist upon this, and cannot impress it upon you too strongly, as upon this subject the laity, you will find, will have a great deal to say. Again and again have I seen them insist that the amenorrhœa was the cause of the pulmonary difficulty; they would insist upon giving the patient hot foot-baths, hot drinks of all kinds, with decoctions of herb teas innumerable, in order, as they said, to establish menstruation.

### ELECTRICITY AS A THERAPEUTICAL AGENT IN GYNECOLOGY.

By PAUL F. MUNDE, M.D., Prof. of Gyn. N. Y. Polyclinic.

From *N. Y. Acad. Med.*, proceedings Nov. 1885.—The pathological conditions of the female sexual organs in which electricity would be most likely to prove beneficial, were the following: Deficient development of uterus and ovaries; amenorrhœa; dysmenorrhœa, obstructive and neuralgic; superinvolution; subinvolution (with or without menorrhagia); hyperplasia uteri; chronic ovaritis and salpingitis; chronic cellulitis and peritonitis, and lymphangitis; pelvic neuralgia, local and reflex; uterine displacements; erosions of cervix; uterine fibroids; ovarian tumors.

It was not his intention to make more than a passing mention of the tonic effect of the faradic, and the sedative influence of the galvanic current on the general system in the anæmia so frequently accompanying utero-pelvic disease.

The author of the paper then discussed at length the use of this remedy in the above affections, and then gave the following counter-indication, that the rule to avoid it in all cases of acute or subacute inflammation of the pelvic organs about covered the ground, although there might be exceptions to that rule in instances of mild subacute cellulitis and ovaritis.

The conditions in which the two varieties of the electrical current act most beneficially were summarized as follows:

*Faradism.*—Deficient development of uterus and ovaries; amenorrhœa, subinvolution and menorrhagia; superinvolution; uterine displacements, and uterine fibroids (interstitial).

*Galvanism.*—Hyperplasia uteri; chronic ovaritis and pachy-salpingitis; chronic cellulitis and peritonitis, and lymphadenitis; pelvic neuralgia, local and reflex; dysmenorrhœa, neuralgic and obstructive; erosions of cervix; subinvolution, and uterine fibroids (subperitoneal).

The conclusions to be drawn from the experience detailed in the paper were the following:

1. Electricity locally applied was a valuable agent in gynecological practice, and should be more widely used than it was.
2. It did not require special knowledge or experience as an electrologist to be able to use the agent safely and beneficially in gynecological practice.
3. The remedy, if properly used and on correct indications, could not do harm.
4. It should be used only in chronic conditions, and if it was the galvanic current, should give no pain.
5. The conditions in which the faradic current was indicated were chiefly those characterized by deficient development or want of tone of the sexual organs, such as imperfect development of uterus and ovaries, superinvolution, subinvolution, amenorrhœa, uterine displacements, interstitial fibroids. The object of the faradic current was to stimulate the organs to increased growth or activity, and to produce muscular contraction.

6. The conditions in which the galvanic current was indicated were those in which it was desired to promote absorption of adventitious products, chiefly the result of previous inflammation; to allay pain, to excite reparative action, and occasionally to act as a caustic. The rapidly interrupted galvanic current, however, also excited muscular contraction.

7. Perseverance in the treatment was essential to success.

8. Acute and subacute inflammatory conditions, as a rule, counter-indicated local treatment by electricity.

9. The pathological conditions in which electricity proved useful were such in which other treatment often failed or could not be borne by the patient.

10. In organic diseases a permanent cure, or a restoration of the diseased organs to perfect health, could usually not be accomplished by electricity, but great relief from pain, and certainly temporary improvement in otherwise intractable cases could be achieved by it, without danger and with comparatively little discomfort to the patient.

#### PERINEAL LACERATIONS.

From the *Boston Med. and Surg. Jour.* (Editorial), Nov. 5, 1885.—If a laceration involving the entire perineum has taken place, there can be no doubt as to the propriety of immediately putting in a sufficient number of silver sutures to keep the torn parts well together till union shall have been effected. This is not always possible; in fact a great proportion of primary operations are unsuccessful, owing to the irritation of the lochial discharges, which cannot readily be kept from infiltrating the flaps of the wound. Numerous expedients, such as packing the vagina with absorbent cotton, have been proposed to remedy this evil, but none of them are very practicable.

With regard to the details of the operation, no great amount of skill is requisite. The sooner after the rupture ligatures are applied the better. Silver sutures are better than silk, being less irritating; they can also be kept in several days longer than silk, a real advantage in many cases. If, however, silver wire be not at hand, carbolized silk may be used, but the old-fashioned quilled suture is not to be insisted on.

With regard to the after-treatment, the utility of drawing the urine by catheter the first few days is apparent, but there is not entire agreement as to whether the bowels should be kept confined or soluble; though the weight of authority seems to be in favor of maintaining a constipated condition the first seven or eight days, by means of diet and opiates. There is no doubt that excellent results have been obtained by this practice, and at the same time failures have been attributed to it. Dr. Granville Bantock reports in the *London Lancet* (Part II, 1880) several cases of ruptured perineum in which the primary operation was unsuccessful owing to long confinement of the bowels; union seemed good and the perineum sound at the time of removal of the stitches, but the evacuation was so solid, and came with so much force, that the whole gave way. In subsequent operations (immediate or secondary) Dr. Bantock pursued a different course.

The quietude of the bowels for several days was ensured by their thorough evacuation prior to the operation, and by a light diet. On the fourth day he began to administer some mild aperient, and for this purpose a pill, consisting of one grain each of the compound extract of colocynth and hyoscyamus, was given every four hours till the bowels acted. He believes it of importance to get the bowels to act before the sutures are removed, as the sutures strengthen the perineum and anal opening.

The immediate operation may be unsuccessful as far as the restoration of the perineum is concerned, and yet the functions of the rectum may be restored, even in cases where the sphincter ani has been torn. Under the most unfavorable circumstances considerable repair is likely to take place; a torn sphincter may unite and a rectal fistula may heal. There has of late years been much difference of opinion as to the real function of the perineum;

some, as Emmett, holding that to support the uterus and keep it in place is not one of the offices of the perineum, that "a simple laceration of the perineum, even to the fibres of the sphincter and produces no inconvenience after the parts have healed, and only occasionally do we find disturbance of a reflex character due to the presence of cicatricial tissue." Others, on the contrary, and notably, Dr. T. Gaillard Thomas, teach that the perineum is the chief support of the pelvic viscera; "it sustains and prevents prolapse of the anterior wall of the rectum, and of the anterior wall of the vagina; . . . upon the posterior vaginal wall rests the anterior, upon this the bladder, and against the bladder the uterus, all of which depend in a great degree for support upon the perineal body."

There is much to say in favor of the view of Emmett, as every physician in large practice has in mind cases coming under his observation where complete loss of the perineum has never, through long years, entailed any grave discomfort or inconvenience. Nevertheless such experiences pertain rather to the earlier years of women when the health is vigorous, the tonicity of the tissues good, and the pelvis has its usual amount of adipose tissue. Later in life when there is a loss of this adipose, and a general relaxation of the tissues, with a spongy state of the connective tissue, prolapse of the vagina is exceedingly likely to take place, and with it, displacement of the bladder and uterus, perhaps also of the rectum; it is needless to say that no condition more powerfully predisposes and contributes to this train of calamities than loss of the perineal body.

Hence it is that there is everywhere a predominant interest in the prevention and cure of perineal lacerations. Hence the desirability, where a first attempt to repair the mischief has failed, of trying again at an early date.

### GONORRHOEA IN THE FEMALE.

By ANDREW F. COURRIER, M.D., of New York.

From the *N. Y. Med. Jour.*, October 17, 1885.—Koch demands the satisfaction of three conditions in proving that a given infectious disease is caused by a given micro-organism:

1. That one and the same form of spore be always found in a given disease.
2. That the same be easily recognized, morphologically or by its chemical relations, as well as by its behavior to coloring materials.
3. That the disease may be artificially produced in a healthy individual by inoculation with pure cultivations of spores.

These requirements, says Oppenheimer (*Arch. f. Gyn.*, xxv, 1, p. 51), are all fulfilled by Neisser's gonococcus in its relations to gonorrhœa. Pure cultivations have been obtained to the fourteenth generation, and, although the disease could not be induced (Oppenheimer. *loc. cit.*) in dogs, cats, puppies, and mice, it has been in the human subject by Bokui, Bockhardt, and Welander.

The search for these microbes is always difficult, and often unavailing when only a few are present. That we are to depend mainly upon the clinical features for a diagnosis is agreed by Snger, Frnkel, Kroner, and Noeggerath. This is especially true in many of the cases of latent gonorrhœa concerning which the skepticism of earlier days is passing away. The conversion of Fritsch, who was once one of the most pronounced opponents of Noeggerath's views, is an evidence of this.

In discussing the question of treatment, attention must be given to the value of a wise and judicious prophylaxis. Especially should prostitutes—that large class of individuals which society tolerates at such an enormous cost to itself in every way—receive attention of this character. Leaving the moral aspect of the question out of consideration for the present, although this ought to be sufficient to arouse the sympathy of any one who has the welfare of his fellow-beings at heart, it is perfectly clear that any class of individuals which distributes infectious disease in the community should be under police regulations. It matters not what the disease is, so long as it is a source of danger to the community. The reply to this may be that there

is a distinction between infectious diseases which one avoids and those which one dares or defies, of which small-pox will serve as the type of one and gonorrhœa of the other. My rejoinder is that the community—the Government, State and municipal—either tolerates prostitution by taking no steps to suppress it, or it licenses it; and therefore it ought to protect the citizen from the infectious diseases which it entails. The remedy lies in the direction of a properly systematized medical police, with suitable hospitals or stations properly equipped; and this will come when public opinion is aroused to the necessities of the situation through the enlightened instruction of the medical profession.

### PUNISHMENT IN KIND.

An ideal justice has proposed that all crimes should have such punishment as corresponds with their nature. Thus, he who commits murder has his life taken as a forfeit by law; he who steals must restore the stolen moneys and likewise be punished by a fine; he who inflicts bodily injury must have similar injury done himself. Human laws do in some cases, as in that of murder, recognize this principle. But the principle may be carried too far, as happened with the judge who was guided by it in his decision as to the punishment for causing a miscarriage: A careless hodman, ascending a ladder, let part of his load fall upon a pregnant woman who was passing on the pavement, and as a consequence of the injury she miscarried, when the judge to whom the matter was referred by the indignant husband, decided that the hodman must place the unfortunate woman in the condition she was at the time of the accident. Probably the decision was not enforced, and in this respect there was a miscarriage of justice.

But occasionally punishment in kind is very justly inflicted without the intervention of law. A very striking illustration in point is given in one of the recently published lectures by Martineau, *sur la Blenorragia chez la Femme*. The story is this: A Parisian husband gave his wife gonorrhœa, and she kept it for him during more than two years! He was cured of the disease, but at more or less frequent intervals after coition with her, had fresh attacks, although she was supposed to have also been cured. Martineau, upon examining the lady, found there were two or three urethral and periurethral follicles projecting and purulent, that the vulval follicle near the opening of the excretory duct of the right vulvo-vaginal gland were also inflamed, as well as the gland itself, and that there was a sero-purulent urethral discharge.

No one can question the justice of the punishment for the husband's original sin. Unfortunately the moral of the story is in part spoiled by the statement that this man had intercourse with other women without contracting gonorrhœa, during the time his wife was so sure to give it to him under similar circumstances.—*Ed. Medical News*.

### OLEATE OF MANGANESE.

By FRANKLIN H. MARTIN, M.D., Fellow of the Chicago Gynecological Society.

From the *Medical Age*.—There is little doubt left in the minds of therapeutists in regard to the value of manganese as a remedy in certain forms of menstrual trouble. The remedy, in the form of permanganate of potash, was first brought to the attention of the profession by Ringler and Murrel, of London, in the spring of 1883. They recommended the drug in functional amenorrhœa.

In the course of my experiments, acting upon the theory that the drug acted by stimulating the menstrual organs, I was induced to give the remedy in menorrhagia and metrorrhagia dependent upon the atonic condition of these organs. I found to my gratification that it acted equally as well in these conditions as in the opposite. In my published reports I have always been careful to emphasize this point, because it is a demonstration of the manner of action

of the drug, *i. e.*, by stimulating the menstrual organs. I have had unmistakable evidence of its action as a menstrual stimulant, in amenorrhœa, menorrhagia and metrorrhagia. I have obtained very gratifying results from its administration in the irregularities incident to approaching menopause. The remedy has been favorably commented upon by Thomas, of New York, who says: "I think it is the best emmenagogue which has yet been discovered." Dr. Roberts Bartholow not only recognizes its applicability in amenorrhœa, but also its power as a general menstrual stimulant, making it equally efficacious in other forms of menstrual difficulties dependent upon the atonic condition. He said: "The same power which can so stimulate the sexual functions must, when exerted in other directions, prove equally effective."

After publishing my second report on this subject, I received a letter from Sydney Ringer, of London, in which he says: "Like you, I have found the permanganate most useful in atonic conditions." And further, he says: "I was quite prepared to learn that the permanganate is useful in menorrhagia."

Since there is no longer any doubt about the great value of manganese in these distressing menstrual difficulties, the next formidable problem for the therapist to solve is: How shall it be administered?

While having this fact under consideration, it was suggested to me by Dr. Lewis L. McArthur, of this city, that an oleate of manganese might be prepared. The oleate of manganese was prepared as follows: A solution of sulphate of manganese was made in distilled water, and to it a solution of sodium oleate was added. On mixing these two solutions gradually, and with constant stirring, a precipitate of oleate manganese resulted. This precipitate, upon heating, changed to a putty-like mass. This was washed several times with warm distilled water, to remove the sodium sulphate, and the resulting putty-like mass was the pure oleate of manganese.

It is of a light gray color, having a pinkish hue, of a sweet musty taste, and peculiar clay-like odor. It is sparingly soluble in alcohol, and soluble in ether, chloroform, olive oil, and oleic acid.

*The Method of Application.*—Of a twenty per cent. solution of the oleate in oleic acid, one half of a drachm to a drachm is applied to the abdomen of the patient, and its absorption promoted by friction, produced by vigorous rubbing of the surface with the palm of the hand or with the fingers. The rubbing should be continued until the oil has entirely disappeared by absorption.

In cases where it is found impracticable to apply it to the abdomen on account of tenderness, it may be applied on the back or the inner surfaces of the thighs.

In amenorrhœa it should be applied, if possible, every night preceding the expected menstrual period, or at the time the menstruation is due, and until it make its appearance. In cases of menorrhagia or metrorrhagia it can be applied in smaller quantities, every night until the desired effect is produced.

## THE SIGNIFICANCE OF PAIN IN THE DIAGNOSIS OF CANCER.

By MATTHEW D. MANN, M.D., Prof. of Obstetrics and Gynecology in the Univ. of Buffalo.

From the *Medical Press of Western New York*, November, 1885.—It is very curious how strongly the impression has taken hold of the popular mind that pain, severe in character, is a necessary accompaniment of cancer. Nor is the idea confined to the laity alone. A little inquiry will develop the fact that the profession is nearly equally imbued with this notion, notwithstanding that the text-books almost universally, and some of them strongly, insist on a contrary teaching. The fact that pain does not necessarily accompany cancer was first brought to my notice a number of years ago by a case of carcinoma of the fundus uteri, internal, which went on to a fatal termination without a moment's discomfort from pain, tenderness, or any other symptom but hemorrhage and gradually increasing exhaustion. The course of the disease extended over eighteen months.

During the last year this fact in the clinical course of cancerous disease has been forced upon me by an unusual number of cases, some of which I will relate.



One case, which I saw with Dr. Rochester in consultation, had had one breast removed before I saw her. At the time of my visit the other breast was the seat of a hard, somewhat tender mass with retracted nipple. There was absolutely no pain. The breast was also removed, but the disease quickly showed itself in the pelvis, when it produced a large mass with considerable ascites. When last I saw her, there was no pain, but considerable emaciation, and the end not far off.

Dr. Mann relates *five* other cases and says:—These cases have all come under observation within a few months, and might be supplemented by others from earlier pages in my note-book. They, of course, do not include all the cases of cancer seen during the time. Some have been painful, but these have been rather the exception than the rule. They are enough to make clear my point. Pain is not the universal symptom of cancer, even in its last stages; nor is it even common in the earlier stages. Here are cases of cancer of the breast, pelvis, fundus and cervix uteri, including the vagina, in which pain, as a symptom, was entirely wanting.

What is the lesson which these cases teach? Only what has been so often insisted upon before, but which must again be brought to the notice of the profession, that women, especially mothers in the middle age, with only slight symptoms of pelvic disorder, should not be neglected; and, above all, that a bloody or watery discharge in a woman who has passed the menopause is always a suspicious thing and demands immediate attention and an examination, even though no pain exist.

#### THE MAKING AND HEALING OF WOUNDS.

By R. S. SUTTON, M.D., Pittsburg, Pa.

From the *Cincinnati Lancet and Clinic*, October 31, 1885.—The surgeon who deals with a wound created by accident is at a disadvantage, but he who makes a wound has it within his power to prevent suppuration, to attain union by first intention. How shall he do it? Let the knife and other instruments be made scrupulously clean, first with soap and water and finally with alcohol, and be then wrapped up in a clean towel. The needles should be similarly cleaned, and be passed rapidly through the flame of a spirit lamp. Then they should be put through a bit of clean cloth and be wrapped up. The nurse who made this preparation should have first washed her hands in soap and water and then in turpentine or in 1: 2000 mercuric bichloride, and protected her instruments from contact with her clothing by a clean white apron.

The sponges should have been soaked in a five per cent. solution of carbol in water for 48 hours, and been dried out in a linen bag.

The part to be incised should be washed with soap and water and a hand brush, the soap and water cleaned away with hot water, and the parts be thoroughly dried with a clean towel. The parts should then be rubbed over with a slice of lemon, and left to dry.

The surgeon should cleanse his hands as did the nurse, take the needles and instruments from the towels, and place them in clean pans or dishes, and boiling water should be poured over them. He should take the sponges from the bag, lay them in a white basin previously scalded, and pour a small quantity of boiling water over them. If he cannot wait for the water to cool, or if it does not get sufficiently cool while the anæsthetic is given, he may lower the temperature with water already cool, but which has been boiled, or with cold five per cent. carbol solution in water. With these tools and sponges he may safely cut into the surface prepared.

So much for making a wound. With the hemostatic forceps the mouths of all bleeding vessels should be crushed. In closing the wound accurate coaptation of the edges must be observed, the sutures (if no drainage is intended) should be placed not wider apart than one quarter inch. They should be of silk scalded or boiled, or of silkworm gut, or chromotized catgut taken directly from a five per cent. carbol solution, the carbol being largely removed by scalding, as we did the needles, etc.

¶ If drainage is intended, a few strands of catgut, a Neuber's tube, or tube of rubber, or bunch of horsehair direct from a solution of carbolic acid, and scalded may be inserted, and at the point of insertion the stitches may be a little wider apart. Ordinarily the drain may be safely removed in 48 hours. But under the careful precautions delineated, drainage is scarcely required.

The super dressing I believe to be the best, is iodoform dusted along the wound from a salt bottle or pepperbox, and a few layers of gauze over this.

This has been my method for three years and over, and during that time I have never seen a drop of pus in a wound which I made. All this detail is now carried out by my nurses with the exception of the sponge cleaning which I do myself. The suture I habitually use is silk worm gut, and it may be left in indefinitely. I have carefully examined a bit of it which was in the tissues for over a year and was unchanged. The carbolic acid is used only as a preservative in sutures and is scalded out before using them. The carbolic water is added to reduce the temperature of the boiling water only because I know it to be sterilized. If an assistant is used his hands should be as clean as the surgeon's. If no drainage is used the wound requires no redressing or looking after for a week. If drainage is used this may be renewed in forty-eight hours with an observance of every precaution against any infection and the dressing renewed where required may then remain until the healing is completed. Without all this a multitude of cuts will heal by first intention but it requires even as much as this, if not this exactly, to insure healing by first intention every time and this is what we want. These practical suggestions, for that is all intended, will be found to pay for the trouble they make us. It is practically cleanliness, boiling water and iodoform.

#### SPONGE TENT REMAINING IN THE UTERUS EIGHT DAYS.

By JAMES P. BOYD, M.D., Albany, Prof. of Obs. and Diseases of Women and Children Albany Med. Coll.

From the *Albany Med. Annals*, October, 1885.—The patient had suffered from menorrhagia and metrorrhagia for many months. She complained also of pain in the lower part of the abdomen, and had lost strength. After treating her for a time without benefit, her attending physician determined upon a thorough examination of the cavity of the uterus, as he suspected that the hemorrhage was due to a growth situated above the os internum. Accordingly he introduced a sponge tent of medium size, and, this not answering his purpose, he waited a day or two and then inserted a second tent. This was done in the evening. Calling the next morning for the purpose of removing the tent, he was astonished to learn that it had dropped out. The patient stated that a number of clots had been expelled from the vagina, and, with them, the tent. A vaginal examination revealed the fact that the cervical canal was well dilated as far as the os internum; at this point, however, owing to the insufficient dilatation, nothing of importance was discovered. The next day the discharge, which still continued, began to be offensive, and the physician became alarmed, fearing that the tent might have been retained, notwithstanding the assertions of the patient. As the discharge continued, and as the patient now began to suffer from chills and fever, it was decided to seek for advice. On reaching the house the patient was found sitting up and looked strong and vigorous. We found the uterus enlarged. The sound entered a distance of a little over three inches. A finger could be passed as far as the os internum without difficulty. The examination was not satisfactory. Returning soon after with suitable instruments, I dilated the cervical canal with Ellinger's dilator, and then passed my finger up and through the os internum, when I immediately detected the sponge tent. With an ordinary uterine dressing forceps I seized the tent, which was fully expanded and very offensive, and without much difficulty removed it. Whilst removing the tent I discovered a growth attached to the fundus uteri. After the removal of the tent the uterine cavity was washed out with hot carbolic water. Cotton soaked in pure carbolic acid

was applied to the mucous membrane of the uterine cavity, and the patient was instructed to remain perfectly quiet in bed. Hot-water injections were ordered for the vagina every four hours. Quinine was also prescribed. A few days later the patient felt well enough to return home. The discharge had ceased. A few weeks later she returned to be treated for the uterine tumor, all the bad effects of the sponge tent having completely disappeared.

### REMOVAL OF THE OVARIES ON ACCOUNT OF UTERINE TUMORS.

From the *Medical News*, Oct., 1885 (Editorial).—The operation which is generally known as Battey's, consists in the removal of the healthy or only slightly diseased ovaries, to produce a premature menopause. Various indications have been given for this operation, and the number of cases in which it has been performed increases almost daily.

Apart from any danger in the operation, it must always be regarded as a very grave act to remove a woman's ovaries while she is still in the reproductive period of life.

Still further, we believe that an unmarried girl who has had her ovaries removed has no right to enter marriage—her necessary sterility debars her from it, and this she ought to be told before her consent to the operation is given.

But that the ovaries may and ought to be removed for certain diseases cannot be doubted. The interests of the individual become paramount, and those of the race are given no weight; her life must be saved, even at the sacrifice of all possibility of her having offspring. Now it is in the discrimination as to these cases that not only scientific knowledge and professional experience, but also ethical considerations enter: the removal of the normal ovaries is always a question in morals, as well as in medicine, and cannot be evaded in either relation without evil results.

One of the applications of Battey's operation has been considered at some length by Dr. Notta in a recent number of *L'Union Médicale*. It concerns hemorrhagic fibro-myomata of the uterus. Notta goes so far as to suggest that it is probable these growths give the sole indication for the operation. His views are in direct opposition to those expressed by Dr. E. Schwartz, in the recently issued thirty-seventh volume of the *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques*. The latter states:

"Notwithstanding some success from this intervention, we think it should not be resorted to unless ablation of the uterus is absolutely impracticable and medical treatment insufficient, for when one makes a patient run the risk of laparotomy, it is necessary at least to give her decided chances of cure."

Of course removal of the ovaries, or of the uterus, ought not to be done until medical means have been ineffectually tried, but certainly the latter operation carries greater risk to life than does the former, whether called by the name of Battey, or of Hegar, and therefore should be rejected if anything like as good results can be secured by the other.

Notta gives the following conditions as indicating removal of the ovaries: The uterine tumor of mean, especially of small size, and directly inaccessible; causing incoercible metrorrhagia, which places the patient's life in danger, she being still young, and medical means for the cure of the hemorrhage having failed.

We are persuaded that in some cases of uterine fibroids causing metrorrhagia, a masterly inactivity, so far as surgical means are concerned, or simply an armed expectation, is the wiser plan. If one knows how to arm himself with patience, and to inspire the sufferer with confidence, he may find that the great majority of his cases of uterine fibroids will get on well without surgical treatment. Thornburn regarded 10 per cent. as a most liberal estimate of those cases that require the aid of the operating surgeon.

## WHAT SOME GREAT MEN THOUGHT OF THE CORSET.

The *Medical Record* tells us that Napoleon Bonaparte said to Dr. Corvisart, speaking of the corset: "This wear, born of coquetry and bad taste, which murders women and ill-treats their off-spring, tells of frivolous tastes, and warns me of an approaching decadence." Joseph II. of Austria was very severe upon the corset, and made a law confining its use to abandoned women. The last King of France embodied his opinion of this abomination in this stinging epigram: "Once you met Dianas, Venuses, or Niobes; now-days, only wasps." The great naturalist Cuvier was walking one day with a young lady, who was a victim of tight lacing, in a public garden in Paris. A lovely blossom upon an elegant plant drew from her an expression of admiration. "Looking at her pale thin face, Cuvier said, "You were like this flower once; to-morrow it will be as you are now." Next day he led her to the same spot and the beautiful flower was dying. She asked the cause. "This plant," replied Cuvier, "is an image of yourself. I will show you what is the matter with it." He pointed to a cord bound tightly round the stem, and said: "You are fading away exactly in the same manner under the compression of your corset, and you are losing by degrees all your youthful charms, just because you have not the courage to resist this dangerous fashion."—*Med. and Surg. Reporter*.

## SILK WORM GUT SUTURE.

Dr. R. S. SUTTON, of Pittsburgh, Pa. (*Med. and Surg. Reporter*).—A number of us during the last two years have been inviting the attention of operators to the value of the silk worm gut for suture. For two years and a half I have used it to the entire exclusion of silver wire, and have come to believe it is better. In nearly fifty cases of operation for lacerated cervix I have used it without encountering a single failure. The ends were always left long, and the ease of removing the sutures at the end of a week is exemplified by the fact that seven sutures are readily and painlessly removed in one minute. In twenty-eight laparotomies I have united the abdominal wound with it. I have left the sutures in as long as sixteen days, and no pus has yet been seen in the line of a stitch.

In three cases in which I made supra-vaginal amputation of the uterus and both ovaries, all of whom recovered and are at home well, I left a large number of sutures from this material in the pedicle (neck of uterus). They have never given any inconvenience. In a score of perineal lacerations I have used it with uniform success, where the laceration did not involve the sphincter ani muscle. Where the muscle is involved, if this suture is used, it will be found advantageous to make subcutaneous division of the muscle opposite the coccyx, as otherwise the suture will cut very deeply.

My manner of preparing this suture for use may be of advantage to some. It is as follows: I buy ten "hanks" or bundles of the gut, each bundle containing 100 strands or threads. The end of the hank is wrapped with red cord. Just above this, I cut the hank across, and again cut it across beyond the knot securing the free ends of the hank. I now tie one knot in the hank. It will then lie nicely on the bottom of a large salt-mouthed glass-stoppered bottle. All the hanks are so treated, put in the bottle, and covered with a five per cent. solution of carbolic acid. The bottle contains 1,000 sutures; they cost just ten dollars.

They are always ready, perfectly aseptic, and soft enough to tie. When an operation is begun, I throw a hank into a bowl of boiling water, and use them directly from the bowl.

Every wound after it is closed is dressed with a heavy layer of iodoform. If it be a cervix nothing else is used; if a perineum, the iodoform is in and out of the vagina, and some iodoform cotton is secured to the wound by tying the free ends of the suture across it. If the wound be abdominal, iodoform gauze is also used. This work has nearly all been done in my private hospital, and I have not yet seen a wound made in the hospital suppurate.

## VAGINISMUS.

By J. SCHRANK, M.D., Emeritus Clin. Asst. and Officiating Phys. of Police, Vienna.

From the *Louisville Medical News*, Nov. 21, 1885.—Translated by D. T. Smith, M.D.—Simpson and Sims, who first directed physicians to vaginismus, gave a very vague definition of the disease. They considered it a painful contraction of the entrance of the vagina.

At the present time nearly all gynecologists hold as characteristic of vaginismus excessive sensibility of the introitus vaginae, combined with spasmodic contractions of the vagina, on the entrance into it of a larger or smaller body, or on touching it with a fine hair-pencil. This affection nearly always, as Bermann (*St. Petersburger Med. Wochenschrift*, 1885) also pointed out, follows immediately upon defloration and prevents further cohabitation by the intolerable pain which accompanies the act. Vaginismus acquires therefore not only a therapeutic, but also an important medico-legal significance.

If it results that the affection works an effectual obstruction of the object of matrimony, then, on the one hand, it renders coitus impossible, and on the other necessitates thereby, in nearly all cases, sterility. It is, therefore, clear that this affection, in proportion as it occurs in the beginning of married life, can give occasion to conjugal unhappiness, which, if the evil is not promptly removed, might lead also to the separation of the newly married.

Gynecologists have attributed vaginismus to various causes, such as fissures of the hymen, anal fissures, lead poisoning, neuralgia of the clitoris, gonorrhea; traumatic injuries resulting from the first coitus, will, among others, be especially considered.

According to my view, which is confirmed by the observation of several cases in various stages, vaginismus results from ruptures of the hymen extending into the tissue of the vagina, and occurring at the time of defloration. When such injuries are present, they will be aggravated by every effort to introduce an object into the vagina, and the most severe and unendurable pain be produced at the entrance; in consequence of which will be elicited spasmodic phenomena in the vagina itself.

It is, therefore, as Gillard (in *Paris Annual de Gynecol.*, 1879) asserts, the pain is the primary, and the cramps the secondary affection. Often the fissure is easily discovered, as in the case described by Fritsch (*Arch. f. Gynecol.*, 1876. x.); if, however, it is very small and hidden in a fold, it is so much less likely to be seen, as on account of the great pain attending every touch, no proper examination of the parts involved can be made.

The occurrence of lacerations of the hymen extending into the vaginal tissue has a feature similar in its nature to the foregoing; the stronger and thicker the hymen is, the greater the force which must be exerted in deflowerment, and the more easily a laceration can occur which extends further than is necessary.

A narrow vagina contributes also a considerable share in the production of fissures. If coitus is tumultuously accomplished under such a condition, rupture of the hymen extending into the vagina will much more readily occur than when the latter is wide and relaxed. There had been, in all the cases with which I am conversant, a narrow vaginal aperture.

If we would draw a parallel between vaginismus and the painful disturbances in the rectum called forth by anal fissures, we should be compelled to accept laceration as the cause of the former trouble.

The variety of causes to which, as already mentioned, different gynecologists have ascribed vaginismus has arisen from failure to discriminate between this affection and the spasmodic conditions of the vagina. Thus Neftel reports a case in which vaginismus occurred in consequence of lead-poisoning, and where only a spasmodic closure of the vagina took place; there was wanting the excessive sensibility at the aperture of the vagina. This condition, then, may be conceived to be a spasm of the vagina.

I might here point out that in case of a narrow vagina, and a mutual disproportion of the genital organs, it sometimes happens that spasmodic con-

tractions take place in the vagina which cause some pain, but only in the back part of the vagina, and hinder for a few seconds the insertion of the member, but never render coitus impossible of accomplishment on account of intolerable pain.

Some gynecologists are of the opinion that anal fissures produce vaginismus, since the sphincter ani and the constrictor vaginæ stand in an intimate anatomical relation with each other, so when cramps occur in the sphincter, in a reflex way contractions in the vagina may result. According to Bermann (*St. Petersburg Med. W.*, 1878) the cause of vaginismus may lie in a nervous, irritable or easily excited organism, but which may operate only after the first intercourse.

When the latter is the case, the prime cause can be in nothing else than the injury received in the first copulation.

According to Martin, vaginismus may also be observed after gonorrhœal affections. It is probable that in such a case the injury has taken place before the gonorrhœa, and that through the inflammatory influences and the contagious secretion it has become aggravated and brought out more sharply.

According to Scanzoni (*Lerb. d. Krankh. d. weibl. sexual organe*, 1867) vaginismus results always from the irritations of the aperture of the vagina caused by efforts at the consummation of the marital act. Through repeated efforts at copulation painful hyperemias and inflammatory swellings are produced at the introitus vaginæ, which increase in consequence of the continuance of the violence.

If one would only accept the view of Scanzoni, that ruptures of the hymen extending into the vaginal walls were fancies, then would it be inexplicable that prostitutes, in the beginning of their trade, sometimes receive daily more than thirty times the irritation of coitus without vaginismus resulting.

Sexual excesses in women, as long as the vagina is not sufficiently enlarged and its mucous membrane has not become toughened, may have traumatic results in the form of intense redness, swelling, and painfulness of the vaginal aperture; but they never reach that degree where copulation becomes impossible on account of them.

Sims (*Gebärmutter chirurgie*, 1870) understands by the term vaginismus, as already indicated at the beginning, a painful contraction of the aperture of the vagina. If the history of the disease as given by Sims taught nothing else, there would be no difference between his definition of this disease and spasm of the vagina. Sims has also very little to say in regard to the cause of the disease thus named by him.

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## DISEASES OF CHILDREN.

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### A NEW METHOD OF TREATING DIPHTHERIA.

By R. J. NUNN, M.D., Savannah, Ga.

From the *Atlanta Med. and Surg. Jour.*, October, 1885.—In the study of a successful mode of treating diphtheria, two aims must be kept constantly before the mind: (1) To neutralize the constitutional taint. (2) To remove and arrest the formation of local deposits.

Assuming that the cause of diphtheria is a microbe, the destruction of the germ may be accomplished in two ways: (1) By chemical re-agents, known as antiseptics, etc. (2) By the discovery of some other micro-organism, which will eat up or destroy the microbe of diphtheria.

This paper has to do with the chemical re-agent only. Supposing that the microbe of diphtheria exists in the blood, let us stop a moment to inquire if we are in possession of an antiseptic which will prevent the germination of its spores.

Iodide of potassium can be given in such quantities, without discomfort to the patient, that it will appear in the urine in amount sufficient to prevent the development of bacteria and consequent decomposition. I have preserved specimens of such urine unchanged for months. To appear in the urine the salt must pre-exist in the blood, and if it can produce such results in one fluid, it is fair to conclude that it will produce similar effects in the other.

Following the table of Dr. Miguel, it will be observed that the proportion of biniodide of mercury to beef tea would be as one to forty thousand; assuming a child to weigh fifty pounds or 85,000 grains, one grain would be sufficient to render the whole mass thoroughly aseptic, but if the results attained with iodide of potassium can be taken as a guide, this quantity may safely be divided by nine or even by eighteen so that the 1-18 of a grain of biniodide of mercury kept flowing through the system would thoroughly prevent the development of bacteria in a child weighing fifty pounds, but be it observed that even this minute proportion may be still farther diminished when it is administered in conjunction with iodide of potassium, which, as shown above, is in itself a powerful systemic germicide.

Theoretically, then, we may assume that a solution of biniodide of mercury in iodide of potassium, in the minute proportion just mentioned, is sufficient to prevent the development of the bacterial elements of disease. Upon this point it only remains to say that the theoretical anticipations just expressed were fully verified by practical results.

It will be observed that one of the first indications to be fulfilled is to keep the system saturated with the antiseptic, and therefore the doses of the iodo-hydrargyrate solution must be given at short intervals; five or six drops every ten minutes.

The weakest solution I have used is one grain in eight ounces for very young children, but I usually employ a solution of one grain in four ounces. The proportion of iodide of potassium I have varied according to the age of the patient, the amount detected in the urine and the constitutional symptoms produced; upon this point, however, the experience of the physician must be the best guide.

The use of peroxide of hydrogen as a solvent of the membranous deposit of diphtheria has been elsewhere suggested by me, and I desire still to advocate its employment, because, while it is a most powerful solvent of the pseudo-membrane, it is without action upon the healthy mucous membrane, and it has the further advantage that in the dilute form to be had in the market it cannot be classed among the poisons. With the peroxide of hydrogen the diseased membranes are thoroughly washed twice, thrice or oftener daily, according to the severity of the case, the washing being accomplished by means of the spray, the brush, the douche, or any or all means that the peculiarities of the case may require, or the ingenuity of the physician may suggest. There is, however, one drawback to the employment of this agent, viz.: that although rapidly dissolving and washing away recent deposits and pultaceous membrane, it seems almost powerless against thickened and hardened masses; hence has arisen the necessity for a softening or digestive agent.

Many applications have been suggested for this purpose, such as pepsin, pancreatin, trypsin, papayotin--all of these I have used, but it is to the last of these that I give the preference, because it acts equally well in solutions, having an acid or an alkaline reaction.

The papayotin is applied to the membrane in powder by means of a powder blower, or it may be used in solution. The parts should first be thoroughly cleaned with the peroxide of hydrogen, and nothing should be given for twenty minutes or half an hour after the application, the object being to avoid washing off the papayotin before it has had time to act. I have been in the habit of making these applications twice or thrice daily.

Other local applications, which have been suggested, I have used; among them the etherial solution of iodoform has proved most useful in my hands.

Stimulants and nutriments are of course to be pushed as being the basis of all treatments.

## FORMS OF PARALYSIS MET WITH IN YOUNG CHILDREN.

By WHARTON SINKLER, M.D., of Philadelphia.

From the proceedings of the *Phil. Obs. Soc.*, Oct., 1895.—The most frequently met form is infantile spinal paralysis, or polio myelitis anterior. This term indicates the pathology of the disease, which is an inflammation of the nerve cells of the anterior horns of white matter of the spinal cord. This affection may come on at any period of life, but is generally seen in children, and usually at the age of two years. The children are generally strong and apparently healthy, and the paralysis is sudden in its onset. Fully two-thirds of the cases I have seen have been attacked in the summer months, hot weather and teething seeming to be predisposing agents. The attack is preceded by fever of greater or less intensity, with pain in the head and limbs, with general soreness when moved or lifted. After a few days, paralysis more or less complete occurs, but in a few days a regression of the paralysis from some of the affected parts occurs. Sensation is undisturbed. Atrophy of the muscles is soon apparent, in fact the paralyzed portion stops growing for a time. The temperature of the affected portion is low, and the skin is blue and mottled, but there is no tendency to ulceration, and wounds or scratches heal readily. The exact causes of infantile palsies are unknown. Over-fatigue often precedes an attack; sudden chilling is considered by Seguin to be a frequent cause.

The prognosis as to perfect recovery is only moderately good. In many cases the most faithful treatment fails to restore the paralyzed muscles, but in almost every case we can expect more or less improvement.

In the early stages of the paralysis, after the subsidence of the fever, the treatment should consist of mild stimulation to the spine; ergot and small doses of bromide of potassium should be given internally. Later in the disease, iodide of potassium should be given instead of the bromide. When the palsy is established, electricity and massage are the means to be depended upon. They must be persisted in for months, or even for years. Internal treatment is of little or no value unless there is some failure in the general health of the child.

*Paralysis from Pott's Disease.*—Paralysis of lower extremities may result from caries of the spine. The lesion may be either a meningitis or a myelitis. If meningitis alone, there is considerable pain and contraction of the legs. Generally there is a myelitis. The symptoms are numbness and pricking of the legs, with loss of sensation; gradually increasing loss of power with wasting of the muscles; incontinence of feces, with retention or incontinence of urine. Sometimes there are ulcers over the sacrum or on the limbs.

The indications for treatment are evident. An apparatus which will take the weight of the body from the spine is necessary, and is sometimes sufficient of itself.

Paralysis from Rachitis and Diphtheria is seldom complete. The former is often spoken of as the pseudo palsy of rickets. Cod-liver oil and massage bring about the most satisfactory results in these cases. Diphtheritic paralysis usually begins in the muscles of the soft palate and pharynx, and extends to the extremities. It is generally bilateral and incomplete, but I have seen a case in which it was hemiplegic. Diphtheritic paralysis is rarely fatal, and lasts in most cases only a few weeks, although it may continue for months. Strychnia and electricity are the means to be employed, and the case usually responds promptly to these remedies.

Pseudo Hypertrophic Paralysis is a rare affection, but is of much interest. The disease belongs almost exclusively to infancy. It is characterized by muscular paralysis, with great increase in the bulk of the muscles. This enlargement is due to fatty deposit, while the muscular tissue proper is atrophied. The affection begins with weakness of the legs, a peculiar balancing of the trunk, and separation of the legs in walking. The shoulders are thrown far back in standing and walking. There is great difficulty in getting from the sitting to a standing position. Later in the disease the muscles become wasted and shrunken, and the general health begins to suffer.



Death results from implication of the respiratory muscles. The skin is mottled like a piece of Castile soap. There is often a greater or less amount of mental weakness. There is no loss of power over the bladder or rectum, and sensation is not affected. Heredity influences the disease, which is slow in its progress, but the course is steadily downward.

*Cerebral Palsies.*—Hemiplegia may result from some injury at the time of birth, either from the forceps or from the pressure of a prolonged labor. A child may be born hemiplegic after a perfectly natural and easy labor. Under these circumstances we must regard the paralysis as the result of imperfect cerebral development. Hemiplegia, under these circumstances, is generally permanent.

As a rule, the prospect of recovery is bad; even if the patient gets well, the hemiplegic side remains awkward.

*Treatment.*—Cod-liver oil and massage, which always relaxes the contracted muscles. The affected limbs should be used as much as possible.

### INFANTILE PARALYSIS.

By AP MORGAN VANCE, Louisville, Ky.

The *N. Y. Med. Jour.*, Nov. 7, 1885, says: The ailment known as infantile paralysis is, and always has been, the dread of the orthopedist. It is productive of almost half the cripples we meet, and is dreadful because of the meager results attained by treatment, most of the authorities now holding that all relief derived comes spontaneously, and the effects of treatment other than that to prevent deformity and to promote locomotion are nil. This has certainly been my experience so far in the effort to revive the muscles which are lost.

The use of mechanical appliances for the purpose of gaining the above-mentioned results is very unsatisfactory.

It has been suggested, I believe, in England, and in some cases acted upon, though the results have not been reported, that the residue of the paralyzed muscles have a section removed, thus gaining by an inelastic band better control of the joint below. It has also been recommended, whether carried out yet or not I am unable to say, that in some forms of talipes calcaneus, for instance, the tendo Achillis be resected, thus gaining an inelastic band, as mentioned above. The third suggestion, and the one I have taken advantage of, is to *excise the useless joint and produce bony ankylosis*, thus doing by bone what we attempt to do by apparatus.

This seems at first glance to be very bold surgery, but, when we look first at the utter hopelessness of these unfortunates, and at the fact that the joints are alive and the bone in young subjects healthy, we may hope for less risks than when we get our prognosis from statistics of excisions where bone disease exists. The greatest difficulty is the gaining of the patient's consent. No surgeon should ever perform any grave operation which is proposed for convenience without making the patient cognizant of the risks he is undergoing. Dr. Vance then gives the histories of three successful cases; two of the ankle- and one of the knee-joint.

### SURGICAL TREATMENT OF INFANTS.

By DR FORREST WILLARD, M.D., Lecturer on Orthopedic Surg. Univ. of Penn, Etc.

From the *Archives of Pediatrics*, Oct., 1885.—Adherent and contracted prepuce or *phimosis* has been the subject of much discussion in regard to its casual influence upon certain nervous manifestations. My views upon this subject have been already published, and after two years of additional experience, during which time I have been brought daily in contact with this class of cases. I can reiterate what I then stated—namely, that while more or less adhesion is an almost constant and normal condition, yet that when urinary, choreic, parietic, or any other nervous symptoms develop, a careful

investigation should never be omitted, since a direct relation will, in a certain number of cases, be clearly evidenced, and removal of the cause will speedily cure the manifestation. The fact that even circumcision does not relieve the symptoms is undoubtedly true in many instances, and I have never claimed that preputial adhesion and narrowing was anything more than one of several factors which should be carefully scrutinized. I have only urged that its influence should not be overlooked, and when so simple an operation as stripping the prepuce from the glands by the thumbs, or possibly by the use of a probe, is all sufficient, there can certainly be no argument against removing this one factor. My opinion in regard to the feasibility of drawing back the prepuce in young children, even when the opening seems scarcely pin-hole in diameter, has been greatly strengthened, and circumcision is only necessary when the simpler method described fails to secure a prepuce freely movable over a normal glans. Dilatation even is but rarely required, a few moments of continuous pressure soon revealing the mucous layer, adherent, perhaps, just about the meatus, which, when loosened, permits the head to pass through the opening, and the corona is freed with the thumbs. Should temporary paraphimosis occur, two probes, or a hair-pin slipped beneath the constriction, will easily permit replacement.

Congenital *hydrocele* rarely requires much surgical interference beyond an evaporating lotion of muriate of ammonia or alcohol, as a few weeks will often close the canal, if hernia does not co-exist; a fact which can be determined by non-translucency and capability of reduction.

Simple umbilical and inguinal *hernia* should receive every attention, as, contrary to the rule in adults, a cure can often be effected during the first year of life by the persistent use of a truss. In young infants, I prefer the hard rubber variety as more cleanly. The instrument should be applied during the first few weeks of life, and continued for one or more years. The treatment of strangulated hernia does not differ from that of the adult, but in obstruction of the bowels, intussusception is so commonly the cause of the blockade, that unless violent peritonitis is present, laparotomy with careful search for the invagination offers the best hope for relief, and I am glad to say is rapidly growing in favor.

*Tongue-tie* is a condition that exists more frequently in imagination than in reality, yet the operation for its relief need be no more than the most trifling nick of the frenum, the finger completing the work. If the organ can be protruded to the red border of the lip, no operation is necessary.

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### INTUSSUSCEPTION.

By CHARLES B. KELSEY, M.D., New York.

From the *Archives of Pediatrics*, Oct., 1885.—The diagnosis of intussusception presents many difficulties.

After the existence of intestinal obstruction of some kind has been made out by the symptoms in a child, it is safe to consider it an intussusception, and act accordingly.

Fifty per cent. of all cases of acute intussusception occur in children, and examples of other forms of obstruction in them are exceedingly rare.

The treatment of acute intussusception in children consists solely in efforts at reduction, and these may be enumerated as follows: (1) Opium; (2) Enemata and insufflation; (3) Laparotomy. Opium is indicated in almost every case, and even should a case of colic be mistaken for an intussusception it can do no harm. It quiets peristalsis, and in this way not only prevents the growth of the invagination, but greatly favors any effort which nature may make toward spontaneous reduction.

If there be an appreciable tumor in the rectum, the opium may be followed at once by attempts at mechanical reduction. If there be no tumor which can be seen or felt, it is better to wait till the effect of the opium can be seen before resorting to mechanical measures. Invaginations in the

rectum which could be felt, have been reduced by the use of a long, flexible bougie, or by enemata of water and the insufflation of air; those higher up beyond the reach of instruments by the latter methods. The use of large enemata offers the best chance of success, and yet to be of use they must be employed before the gut becomes irreducible, either from strangulation and swelling or from adhesions. The danger in this method of treatment consists in the possibility of rupturing an ulcerated gut at the seat of the disease. It is better to employ the steady pressure of a weight of water in a jar above the patient, than to use the ordinary syringe; and the enema should be as large as can be retained. It should be administered slowly and not too forcibly, should be held in by force used against the anus, and allowed to do its work in its own way. The patient should be laid on the side and held there. Chloroform may be used, but serves to mask symptoms while it quiets the child. The receptacle for the water should hold nearly a gallon and be kept full, while it is elevated at least four feet above the patient. The soft rubber tube leading from this should be fitted with a clamp which can be closed or opened by a touch of the operator's hand. The bougie should be of flexible rubber. The small-sized rectal bougie, No. 3, is as good as any instrument to pass up the bowel, and may be connected with the supply-pipe by a glass tube properly fitted to each. In this way a constant, even pressure of a strength sufficient for the purpose, and completely under the control of the operator may be secured.

But these measures in children are only tentative, and too much time must not be wasted in trying them. In children the disease runs an acute course, often fatal in forty-eight hours, and what is done must be done soon after the physician is called. If these measures fail after a fair trial, nothing remains but opening the abdomen. It is useless to count on spontaneous reduction or upon gangrenous separation in a child.

### INTUSSUSCEPTION.

By C. S. Wood, M.D., of New York.

From *Gaillard's Journal*, Nov., 1885.—In the treatment of this form of obstruction, it must be remembered that the large proportion of the cases occurs in young children; that the usual seat of the lesion is in the vicinity of the ilio-cæcal valve, or low down in the intestinal tract; that operations of the character of laparotomy are badly borne in young subjects, and that when performed most of the cases die at once from the shock, or later from peritonitis and gangrene.

If the existence of the invagination could be ascertained prior to the development of the symptoms denoting incarceration, measures for restoration might be more successfully employed; but such, unfortunately, is not the case, as usually a day or two has elapsed before the attention of the physician is called to the case. In the meantime cathartics have most likely been administered by the fond mother, which will have materially aggravated the child's sufferings instead of affording relief.

The liability to this affection, especially in children, should be constantly borne in mind in all cases of apparent colic, and should dictate reserve in the employment of cathartics. The measures to be adopted should be at once commenced and persevered in, gently but persistently, until relief is obtained, among which the injection of warm water holds the first place; the hips should be elevated in order to obtain the advantage of gravitation, and while the child is being thus held, a syringe having a long tube attachment should be used until the bowel is completely distended, without reference to the quantity employed, the child being held in this position for three to five minutes. This process may be repeated every two or three hours, according to the urgency of the symptoms. The object is to effect the restoration by the pressure of the water upward, as the great majority of the invaginations are downward.

Air has been advised by some authors, also the generation of gases in the intestine are mentioned only to be condemned.

Cases have been repeatedly reported where the injection of water, frequently repeated, has apparently effected restoration of the invaginated bowel, even after obstruction has existed a number of days. If the distention of the gut with water is kept up, it prevents adhesion from occurring, and affords time to avail oneself of other resources of importance. Exclusive of the measures for reduction, the objects of treatment are, to secure as much quietude of the intestinal canal as possible, to palliate suffering, and to support the powers of life under the hope that sloughing and recovery may take place.

Cathartics in all cases should be avoided, while very small doses of calomel, combined with opium, may be judicious treatment.

But whether calomel be used or not, opium should be administered in sufficient quantities to produce rest of the body, and paralyze the muscular coat of the intestines. Fomentations afford great relief, and should be continued with the injections for several days, or until relief be obtained either by reposition or sloughing. All depressing remedies should be avoided, while the strength is sustained by the most nutritious food, given frequently and in small quantities.

#### VACCINATION AFTER EXPOSURE.

According to the last quarterly report of the proceedings of the Illinois State Board of Health, 144 persons suffered from small-pox, the disease having been contracted at a negro "protracted meeting," and of this number 120 had never been vaccinated. Within from three days "to about a week," 14 of these 120 persons were vaccinated. Amongst the remaining 106 cases 38 died, being a mortality at the rate of 35.84 per cent. Of the 14 vaccinated after exposure all recovered; and amongst the 37 who had been vaccinated, prior to exposure, one single person, vaccinated once twenty-five years before died. The late Mr. Marston attached no value to vaccination if performed after an interval of four complete days from the exposure, his statement being as follows: "Suppose an unvaccinated person to inhale the germ of variola on Monday; if he be vaccinated as late as the following Wednesday, the vaccination will be in time to prevent small-pox being developed; if it be put off until Thursday the small-pox will appear, but it will be modified; if the vaccination be delayed until Friday it will be of no use—it will not have had time to reach the stage of areola, the index of safety, before the illness of small-pox begins." But the Illinois report gives prominence to the belief that vaccination has a positive therapeutic value as well as the prophylactic power to which Mr. Marston referred, and in the fifth annual report of the Board of Health it is alleged that "if a patient be vaccinated during the febrile stage and the vaccination progresses normally . . . the areolar stage of vaccination will be reached before the dangerous tenth day of the variolous disease, and, as has been repeatedly witnessed, the graver disease will be aborted, jugulated, or materially modified." Hence it is inferred that it is never too late to vaccinate; we prefer, however, the alternate maxim laid down, which is that in cases where there has been possible exposure, "it is never too soon to vaccinate.—*London Lancet*.—*Canada Lancet*, Nov.

#### CAREFUL VACCINATING.

There is a manifest tendency for small-pox to disseminate itself from its present epidemic centre, Montreal, and we may expect to find it cropping out here and there in the United States during the coming season. Epidemics of this disease are liable to begin in the autumn, and increase in violence during the cold months, owing probable to the crowding together of people at this season. There should therefore be no delay on the part of all unprotected persons in getting vaccinated.

Since so much is now being said about the dangers and accidents of vaccination it behooves physicians to use extra precautions in employing this protective measure. The virus generally used by American physicians is the bovine. This should be fresh, and obtained from a responsible source. The

arm, before its vaccination, should be carefully cleansed, and the instrument invariably and thoroughly disinfected. The operation of vaccinating should in other words, be done antiseptically, and the arm should afterward be kept from all septic influences. Such precautions will lessen the per cent. of unpleasant accidents, and that will give to the physician the satisfaction of feeling that he has done his whole duty in the matter.—*Medical Record*.

#### VACCINATION FOR WHOOPING-COUGH.

As long ago as 1828, Prof. CHAPMAN, of Philadelphia, recommended vaccination as a remedy for whooping-cough. The practice was purely empirical and on its face is a little absurd, nevertheless it has been kept up by physicians here and there, and now receives renewed advocacy in the *Cincinnati Lancet and Clinic*.

Dr. W. F. ENTRIKIN, of Finlay, O., writes: "I have vaccinated for this purpose several hundred children, and almost always with happy results, usually a speedy cure. During the many years I have been familiar with the practice I have seen no reason to discard it. I have frequently seen it recommended in medical journals."

He adds: "I think it best to give the usual treatment until the febrile stage has passed, then vaccinate, and the new disease set up by the virus will usually arrest the nervous and other distressing symptoms."

Other contributors report favorable results from this apparently absurd method of treatment. No positive clinical evidence, however, is furnished.—*Medical Record*.

#### TRACHEOTOMY IN CROUP AND DIPHTHERIA.

By E. E. MONTGOMERY, M.D., Vice-President of the Phil. Obs. Soc., Etc.

From the *Archives of Pediatrics*, October, 1885.—It is the purpose of this paper, not so much to defend the procedure, as to advocate the importance of its early performance.

The effect of the disease, whether it travels from the pharynx, or begins in the larynx, is to encroach upon the lumen of the canal, and give rise to stenosis of the glottis. Symptoms of suffocation are soon engendered, and as the exudation increases extraordinary efforts at inspiration are made. The lungs are but partially inflated, and the air in them becomes so rarefied that large numbers of the air-cells collapse. As a result of this, I saw, in an autopsy, the upper half of each lung completely collapsed and empty of air.

While this should not preclude tracheotomy even in the most desperate cases, it should teach the importance of early operative interference. Besides the relief from the distress of impending suffocation, the banishment of the nervous symptoms, promotion of rest, and advancement of the patient's general condition by the free admission of oxygen, tracheotomy brings us nearer the diseased surface and renders it more accessible to local medication.

*Indications for Operation.*—When shall the operation be performed, is a question often difficult to decide. An operation should be considered as indicated, as soon as there is depression of the substernal tissue in inspiration, with the advent of symptoms of suffocation. The symptom, which, before all others, should indicate the operation, is substernal sinking. It is more reliable than the stridor, for in many cases marked difficulty of breathing may occur with but little or no stridor, and, on the contrary, much stridor with but little suffocation.

It is true, that in following such a course, some cases will be tracheotomized that would recover without it, but the mortality of the disease will be greatly lessened. When the chances of recovery are enhanced by operation, it is better that two children should be tracheotomized unnecessarily, than one perish for want of its practice.

But should an opportunity for relief not be afforded at this time of election, the operation should not be withheld later, for even the worst cases sometimes recover when the stenosis is removed.

## APHONIA SIMULATED IN THE YOUNG.

By LOUIS KOLPINSKI, M.D., Children's Hospital, Washington, D. C.

From the *N. Y. Med. Jour.*, Oct. 17, 1895.—The following cases are reported to illustrate the feigning of disease by the young. They further show the impossibility of impressing upon alarmed and anxious relatives the truth of such deception, and may finally remind the practitioner, called in haste, that, instead of a disease, he may merely have an imposter to treat. The histories of two cases are given, one of a female mulatto, 18 years of age, who suddenly became aphonic as the result of a quarrel with her lover; the other of a negro boy eight years of age, and in which it was not ascertained why he became mute, but under threatened forcible introduction of a spoon-handle and a red-hot iron into the mouth and throat his voice was restored.

Both cases were from a low class of society. The dissimilar ages, the negative characters of their histories, and the bearing of the patients were sufficient to exclude any disease or morbid state in the causation. It was apparent that the object of the sudden and complete loss of speech was intended to excite the alarm of their connections, and thereby gain some point by awakening solicitude. It was impossible in the boy's instance to confirm this by individual statement of mother or child.

But, whatever the motive, the malingerer was successful, for it was soon evident to me that the superstitious minds of the interested ones were proof against every assurance that the aphonia was not real, and that they had been deceived.

To conclude, the mutism which both selected as the startling affliction is the most natural one imaginable. The patients were not sufficiently cultivated to counterfeit some disease requiring knowledge and judgment for skillful imitation, as, for example, blindness and deafness. Children of a bashful disposition, as everybody knows, are mute in the presence of strangers, and our subjects simply repeated what they perhaps had often practised before, but from different motives. It was the half-voluntary, half-instinctive act of an uneducated mind.

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THE FIRST DAY'S DIARY OF A BABY.

Two a. m. Born a few minutes ago. Yelled.

2:15. Am washed. The fool doctor told 'em I was a boy just as if that was something new. Was whacked over the lap of a dizzy-old Christmas card of a nurse who proceeded to tog me out in some bandages and a quarter of a mile of skirts. Kicked.

3:00. Have slept somewhat. The gorgeous old valentine made for me when I stirred, turned me into nineteen different positions. Must be training me for a contortionist. Yelled.

4:00. Have worked the sound wave for a straight hour. The old man isn't looking as happy as he did. I am a high soprano, I know, for I just heard some one in the fourth-story swearing. Old man has remarked that I'll depreciate property for four blocks.

4:10. Everybody is sitting around. The old man has just gotten even with the doctor by giving him one of his cigars. The doctor will have to charge himself up with a prescription pretty soon.

4:11. Told you so! The doctor has just asked the old man if he had ever matched one of his cigars with a glue factory. Yelled in sympathy.

4:15. The amiable old Easter memorial is working a bottle. She saw me watching her and said I was a tootsey-wootsey. I wish I were a shoesy-bootsy, I'd fix her for getting a corner on the family supplies and stowing them away in her stomach.

4:18 to 5:18. Yelled.

5:20. The antique circus-poster fed me on warm water and whiskey. She said I had the colic. Will work the colic racket again.

6:00. Wazzer mazzer wiz ev'body? Giddy old chromo wiz two heads wackin me on the back. Had colic twice.

9:00. Woke up with the headache. The old man ought to keep better goods. Guess I'll yell.

9:15. Am washed. Feel a little rocky. Ten minutes for refreshments, then I intend to do the colic gag over again for a cocktail.

10:00. Old man is writing telegrams about me. He looks a little like a last year's bird's nest himself. Yelled.

13:00. Have been asleep. Woke up suddenly and saw the venerable night-mare they've hired to groom me, working her jaws over enough lunch to feed a shift of section hands. The old man oughtn't to allow it. What'll I do when he kicks out if this waste continues? The thought made me so mad that I yelled.

3:00 p. m. Have dozed. Everybody is doing well but the people in the block who retired out for want of sleep. Old man has confidence in me. He has just said that he'd back my lungs against any steam-whistle in town, best two too's out of three. It makes one proud to have the approval of his parents.

5:00. I was put on a pillow in a chair a few minutes ago, and a fool girl came in and sat down on me. Yelled.

5:20. Colic. Fortunate results; sleep.

5:10. Going to sleep for the night. The giddy old obelisk is in the chair snoring. Room sounds like a round-house. Mighty dull sort of a day. Good-night.—*The Rambler*.—*Cin. Lancet and Clinic*.

## CONSANGUINEOUS MARRIAGES; THEIR EFFECT UPON OFFSPRING.

By CHARLES F. WITTINGTON, M.D., of Roxbury, Mass.

From the *Botson Med. and Surg. Jour.*—The author gives a table of 108 cases of consanguineous marriages, which show only three defects that attract attention as being more frequent than would be expected. These are deaf-mutism in 2.9 per cent. of all the children, insanity in 1.7 per cent., and idiocy in 3.1 per cent. Regarding the first of these, we notice that all twelve of the cases of deaf-mutism in the children of persons related, and the eight cases which occur in the children of those consanguineously descended but not marrying kin, were found in one locality. Other degenerative conditions, however, appear to prevail in this same town, owing to some cause which is not consanguinity.

The seven cases of insanity occurred in four families. Four of the individuals so affected had a marked inheritance of insanity, three of them deriving it from both the father's and the mother's side.

The proportion of cases of idiocy, while very small compared with the figures given in some of those observations that have become the standard for the popular ideas on this subject, is yet in excess of the ratio of idiots to the community at large. How far this proportion is representative of the actual facts, and how far it is affected by imperfections in the data, I am not certain. Of the thirteen cases of idiocy among the four hundred and thirteen children, six are reported from the two isolated communities already mentioned. One of these had a mother and grandmother both deaf mutes. The other seven cases all came to me through non professional sources, and particulars regarding the parentage are unfortunately wanting. The memorandum as to one family said to contain five "fools" was given me through a second person, and it has not been possible to obtain any further information. I have included the case for what it may be worth, but do not feel quite certain that the total figures for idiocy are not unduly augmented by some error in the one case that furnishes so large a part of them.

Taking into account the fact already alluded to, that some of my lay informants have sent me an unfair proportion of the causes célèbres of their vicinity, the total results, it seems to me, are not such as to show any special or conspicuous deterioration peculiar to the children of relations. Of course no one will deny that a union, consanguineous or otherwise, which brings together two individuals having any disease or morbid tendency in common,

will involve a direct danger to the offspring. Is it not possible, then, to account by the ordinary laws of morbid inheritance for such untoward results as sometimes follows the marriages of kindred?

The first objection that is raised against this view is that the children of relations are sometimes diseased when the parents themselves seem to be quite healthy. In answer to this, we may say that a more careful examination would often show that the opinion entertained by a merely casual observer regarding the parents' health was ill-founded. Again, the well-known phenomenon of atavism will account for cases where diseases are absent, or rather latent, in both the persons marrying, which were yet present in their common ancestor or in some close collateral branch, and which are capable of transmission through the married kinsfolk to appear again with reinforcement in their offspring.

Another and stronger objection urged by those who believe in a specific evil effect produced by non-renewal of the blood, is furnished by one or two diseases which are sometime difficult to account for on the ground even of atavistic heredity. Foremost of them in importance for this argument, though a very rare affection, is hemeralopia or retinitis pigmentosa. Some of the leading of ophthalmologists believe that the disease has a specific relation to consanguineous descent. The records of the ophthalmic service of the Carney Hospital of this city, which have been kept with especial care on this point, and which Dr. Standish has kindly gone over for me, shows in a total of 3,726 patients three cases of retinitis pigmentosa. In one there is no record as to consanguinity, in one there was no relationship, and in one the parents were first cousins.

Deaf-mutism is another defect that is often not transmitted directly from an identical form of disease in the ancestors, and it has therefore been ascribed to consanguinity of parents. But Roosa states, that inasmuch as the disease is often due to inflammatory action, it is not likely to be transmitted as such by inheritance. He says that the causes of deaf-mutism are as numerous as those of deafness unaccompanied by mutism. The intra-uterine causes of the disease, operative perhaps in one-half the cases, are quite unknown. The proximate antecedents of hemeralopia are equally obscure. There is some reason to believe that transitory mental states, such as intoxication, may determine the procreation of an idiotic child.

## INDIGESTION IN CHILDREN.

By WM. H. HALE, M.D., Philadelphia, Pa.

From the *Polyclinic*.—Children are particularly prone to disorders of the digestive apparatus, and the most prevalent form is indigestion, especially during the summer, owing to the extreme heat and the ingestion of food entirely unsuited to the age of the child.

Very frequently, on questioning the mother as to whether she had given anything but the breast to an infant of a few months, I have been informed that she gave it a taste of meat, potato, or some other article which it is unable to assimilate. It seems entirely beyond her comprehension that she is giving a poison to the child, and is slowly starving it, from the fact that the absorbents are unable to take it up to supply the wants of the economy.

On first seeing a child with an attack of indigestion, one may be puzzled as to what the affection is. We generally find the child, who but a few hours previously was bright and playful, now listless, languid, lying down, with no interest in his playmates, eyes bright and feverish looking, skin hot, and temperature high, rising in a few hours to 100° F., and even 103° F. or 104° F. The fever generally continues until the removal of the irritating matter from the stomach, when rapidly defervescence occurs. Sometimes there are small diarrhoeal stools, but more frequently constipation exists. If the child is old enough to express itself, it will complain of headache, excessive thirst and nausea. Vomiting generally occurs.



Extreme prostration occurs, and the patient becomes limp, from the severity of the symptoms. Coldness and chilliness are at times complained of, but this is only transient, and is soon succeeded by extreme heat. Vomiting is at times severe, and large amounts of food are expelled from the overloaded stomach, in the same condition as when it was eaten: accompanying it is some mucus, and at times bile. After the expulsion of these matters and the free evacuation of the bowels, the symptoms quickly subside, and a return to health takes place.

The causes of this affection are numerous, but I will only mention a few which are especially prevalent during the hot season.

The ingestion of large amounts of fruit or vegetables, and particularly corn, no doubt from its known indigestible qualities, and large draughts of ice water, which chill the stomach, preventing digestion, are the most frequent causes, and the ones which have come most frequently under my notice. At times we find it due to too frequent nursing, the child being given the breast every time it cries, if that is every five minutes during the day. Children should be nursed at an interval of two hours for the first few months, and as they get older it should be increased in length.

The treatment is extremely simple, so soon as we are positive that it is indigestion. I find a calomel purge, together with a fever mixture, generally all that is necessary. The regulation of diet, together with the above measures, and subsequently a tonic, is all that is necessary to complete recovery.

#### PATHOGENESIS OF RACHITIS.

Dr. M. KASSOWITZ calls attention to the following facts:

1. That rachitis extremely frequently is developed *intra uterum*, where neither digestive disorders nor insufficient resorption of the lime salts brought to the fœtus in the maternal fluids, can be assigned.

2. That rachitis, as is shown by experience and the testimony of numerous observers, very commonly shows itself in children possessed of normal digestion and who enjoy a good bodily condition of nutrition.

3. That in the summer months, just when disorders of the digestive apparatus prevail in children, the number and intensity of cases of rachitis diminish gradually and in a most striking manner.

4. That, finally, other conditions, which are in no wise connected with the reception and absorption of lime salts, such as bad hygiene of dwellings, syphilis, etc., favor the development of rachitis in a most remarkable degree.

After considering other theories of pathogenesis, the article concludes with the following propositions: (1) That the deficiency of lime of rachitic bones is called forth, singly and alone, by the local inflammatory process. (2) But the local process in the bones in turn has its origin in some preceding anomalous conditions of the entire organism.—*Phil. Med. Times*.

#### UMBILICAL HEMORRHAGE.

By WILLIAM HENRY THAYER, M.D., of Brooklyn, N. Y.

From the *N. Y. Med. Jour.*, October 17, 1885.—It is safe to conclude that in cases of umbilical hæmorrhage in new-born children, attended with jaundice, the cause of the hæmorrhage is usually the accumulation of bile in the blood, produced by obstruction of the hepatic or the common duct, or by an abnormal condition of the liver.

As to the general history of these cases, hæmorrhage began at the root of the cord, either when the separation commenced or within a few days after; the average time was the eighth day, but in seven cases it did not begin till the third week; in one case eight weeks from birth. Dr. Murchison, in his work on "Diseases of the Liver," relates the case of a child who died at the age of four months and a half, having had jaundice from its first week, with

progressive emaciation, after a while diarrhoea, the discharges being perfectly white, frequent epistaxis, vomiting of blood, and ecchymoses under the skin, ever increasing in number. The bile-duct was found to be completely obliterated, its place being occupied by a small quantity of areolar tissue.

The average duration of the hæmorrhage in the fatal cases was three days and a half. In a large proportion of the cases there was jaundice several days before the hæmorrhage began; in many of them purpura, either before or after the hæmorrhage, and passages of blood from the stomach or bowels. Constipation was frequent; the stools were white or clay-colored; the urine was deeply stained with bile.

As to treatment, the first indication is to transfix the integuments at the base of the cord with needles, and carry a figure-of-eight ligature underneath them. Styptics and compression are of no avail. But Dr. Jenkins, who advocates the ligature cautions us not to stop with that, but to use such internal remedies as may relieve the liver, where no anatomical malformation exists. Chief of these are nitro-hydrochloric acid and tincture of the chloride of iron, with cathartics, especially calomel.

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### SCARLET FEVER IN A PARTURIENT WOMAN.

By E. J. KEMPF, M.D., Jasper, Ind.

From the *Medical Herald*, November, 1885.—The patient made a rapid recovery, and to date no unfavorable symptoms have appeared.

The infant was allowed to nurse at the breast of the mother during her illness, for it was remembered that infants are rarely attacked with scarlatina. Statistics show that the disease occurs most frequently in the third and fourth years of life, rarely before the second year and after the fortieth, though cases have been reported occurring in infants at the breast, and in aged people of sixty and more years.

Flint reports a case in a woman who was attacked a few days after confinement. So it must not be doubted that the disease can occur in adults. Whether my diagnosis was correct in the case here presented must rest on the description which I have given faithfully and as thoroughly as I knew how.

The stage of incubation of scarlet fever generally lasts from one to six days, though, no doubt, it may last indefinitely. In the present case it is presumed that the stage of incubation lasted two or three days and the midwife carried the germ to the woman when she came to aid her in her confinement. The fact that persons suffering from large wounds are more susceptible to scarlet fever, or other contagious diseases—that is, that they are in a predisposed condition to take up the germ of the disease—ought to caution all midwives and accoucheurs not to attend a case of midwifery before thoroughly disinfecting themselves, if they have come in contact with any source of infection. If they have attended a case of scarlet fever, they ought to change clothing and to take a bath, before they go near a woman in childbed.

I think that the present case contracted the scarlet fever through the midwife, though I could not get the midwife to acknowledge having been near a case of scarlet fever, or any possible source of infection. I have, however, discovered since that the husband of the midwife had a case of supposed scarlatina nine months ago; but that she has not attended any other cases of midwifery, because she is not a regular midwife; she attends only her relatives. How she carried the poison to her patient, her brother's wife, I cannot say; but, no doubt, the germs of infection were hidden in some article of dress that she was not in the habit of using, and that she put on for this particular occasion. Mayhap a shawl; it was in the fall of the year, and the woman may have put on a shawl that was laid away all spring and all summer, possibly ever since the sickness of her husband.

## ADDENDA.

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### EXCISION OF THE HIP-JOINT.

Dr. L. M. YALE, (N.Y. Surg. Soc. published proceedings Nov. 28, 1885), reaches the following: "The conclusion then, to which the foregoing brings us, is that exsection of the hip is indicated as a life-saving operation only; and that as it has not been shown that it can save from any dangers except those consequent upon prolonged suppuration, it is, with rare exceptions, only indicated when the suppurative process has evidently reached a dangerous point and cannot be interrupted by any less serious operation."

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### AUDITORY DISTURBANCES CAUSED BY EXPOSURE TO THE DISCHARGE OF FIREARMS.

Dr. BOUCHERON, of Paris, has examined into aural compression in adults, caused by the detonation of firearms. It is stated that very often the surgeon meets cases of deafness in those who have been using firearms. In such cases it is held that at the moment of the accident—i. e., at the moment of the impact of air from the concussion upon the membrana—there is an obstruction in the Eustachian tube. The concussion of the surrounding atmosphere induces sudden compression of that enclosed in the drum-cavity, and secondarily, a compression of the nerves in the labyrinth. If the lesion be slight, the hardness of hearing is transitory; if it be more intense, the nerve-filaments are destroyed and the hardness of hearing is permanent. In those individuals exposed to analogous noises, such as boiler-makers, similar accidents are met with, but only where there is obstruction to the Eustachian tubes from precedent catarrh.

A prophylactic measure recommended consists in advising boiler-makers, artillerists, and those similarly exposed to great noises, to make efforts at deglutition (which tends to open the Eustachian tubes) before being exposed to violent noises or explosions.

The curative treatment consists in inflating the tympanum, in order to restore the membrana tympani to its normal position and thus put an end to the compression.—*Northwestern Lancet*.

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### ON HIP DISEASE IN CHILDHOOD.

*Archives of Pediatrics*.—To sum up. Taking the usual classification of the cause of the disease into the three stages of Ford, the position assumed successively by the limb will be—in the first stage, flexion to a variable degree, with or without slight abduction, and possibly rotation outward; in the second stage, flexion usually well marked, with abduction usually, and rotation outward, producing apparent lengthening; sometimes, however, there is adduction, and sometimes mere flexion, with no rotation, or with rotation inward; in the third stage, there is always flexion, and most commonly adduction and rotation inward, with apparent or real shortening, but there may be abduction and rotation outward. This position, though a valuable, is not an absolute guide, and requires to be checked by the other symptoms present.—*G. A. Wright, Oxon, F.R.C.S., Eng.*

### DOES LARYNGEAL STENOSIS GIVE RISE TO PULMONARY HYPERÆMIA ?

Dr. VAN SANTVOORD, of New York (*Medical Record*), concludes a paper on this subject as follows:—I believe that it has been proved: (1) That total or almost total occlusion of the air-passages may give rise directly to pulmonary hyperæmia; (2) that tracheal or laryngeal stenosis does not give rise directly to pulmonary hyperæmia, but, on the contrary, to over distension, emphysema, and anæmia of the lungs; secondarily, heart-failure and consequent congestion of the lungs may occur; (3) the pneumonia found complicating laryngeal croup is catarrhal pneumonia developing from the extension of the inflammation downward, just as would happen if no stenosis existed. The only effect the latter has upon its development is indirect, in that stenosis of larynx or trachea prevents the free egress of bronchial secretions.

There are good reasons for the early performance of tracheotomy, but the danger of pulmonary congestion, "splenization, and œdema" occurring as a direct result of laryngeal obstruction, is not, in my opinion, one of them.

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### ODE TO A WOMAN'S SKULL.

Within this ghastly skull once lived and throbbed  
A human brain with human passions fraught;  
Here envy, doubt and scorn, and love and hate,  
Within this shrine there came the birth of thought,  
The hopes, the fears, the pangs we feel dwell here.  
This was the house and that we call the soul,  
Frail house! Bereft of all thy garniture,  
E'en now an idiot can thy fate control.  
These empty sockets once held orbs that shamed  
The diamond lustre of the peerless stars.  
The music of the tongue that wagged within this skull  
Held years in bondage by its magic spell,  
And left a thousand hearts with twice a thousand scars.  
And where is now the glory of that beauteous head,  
When tresses waved the wind to kiss their sheen?  
Alas! its loveliness is destroyed and dead,  
But this remains to tell us what has been.—*William Carlton.*

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### PROFESSIONAL COURTESY.

The cars on an incoming train to this city were filled to overflowing and a man who got on at a small station walked their whole length without being able to find more than one vacant seat. This was part of a whole seat on which a single passenger was stretched at length. After standing for a time by this seat and observing no inclination on the part of the occupant to share it with him, he indignantly exclaimed, "You are an infernal hog, sir." "You call me a hog, sir," retorted the other, who was instantly on his feet and in fighting posture. "I'll knock the top of your idiotic head clear across the country, sir." A fight was imminent when the conductor opportunely appeared on the scene. "Hold on, doctor, what's the matter?" shouted the ticket-puncher. "Doctor?" queried the man from the small station, "Are you a doctor?" "Yes, sir." "Why, so am I." "Good gracious, is that so," and they exchanged cards and shook hands. "Why, of course you can have half my seat—all of it—the whole car." "Oh, no, no, doctor! I wouldn't disturb you for the world." "But, doctor, I insist." "Well, doctor, if you insist, why I'll be glad to sit with you." "Of course, doctor." And the reporter of the *Free Press*, who witnessed the affair, says the two doctors sat down together in one seat, and were so soft and tender, and loving, that tears sprang to the eyes of every passenger.—*Medical Age.*

### SYMPATHETIC OPHTHALMIA.

By FLAVEL B. TIFFANY, M.D., Prof. of Ophthalmology, Otolary, and Histology in the Univ. of Kansas City.

From the *Kansas City Med. Record*.—In support of the theory that sympathetic ophthalmia is a reflected disease, and that it is through the medium of the ciliary nerves, and due to diseased filaments of these nerves, and not a progressive inflammation through the optic nerve, I give the following data:

1. Sympathetic ophthalmia is a plastic inflammation, a form of inflammation peculiar to vascular tissue, not to nerve tissue.

2. It is an inflammation of the uveal tract, usually of the ciliary body, frequently involving the iris and choroid, while the retina remains intact.

3. In inflammation of nerve tissue it is the neurilemma or medullary portion, rather than the axial part, that is involved.

4. The optic-nerve sheath does not enter the eye, but passes over on to the sclera, leaving the nerve to enter the eye as a non-medullary nerve.

5. The ciliary nerves enter the eye and do not leave their medullary portion until they are lodged in the ciliary region.

6. The ciliary nerves go to supply, and are intimately connected with, the uveal tract and ciliary region, whereas the optic nerve has no immediate connection with this tract.

7. Were the optic nerve the medium of transmission or propagation of the inflammation by extension, enucleation would not be likely to arrest the inflammation.

8. Sympathetic ophthalmia occurs in eyes with completely atrophied, and even cretaceous degeneration of the optic nerve.

9. The sympathetic irritation has been arrested by division of the ciliary nerves near their entrance into the sclera, leaving the optic nerve intact.

### YERBA SANTA AND GRINDELIA ROBUSTA IN ACUTE BRONCHITIS.

Dr. E. STUVER, of Rawlins, Wyoming Ter., says (*Medical News*): While treating a number of cases of bronchitis with very indifferent success by means of the old orthodox cough mixtures, I began using the above remedies. At first I used yerba santa alone, and obtained very satisfactory results. About this time medical journals contained numerous reports of the singularly beneficent effects exerted by grindelia robusta in asthma, and it occurred to me that it would be a valuable addition to a cough mixture, especially when designed for the relief of the very annoying cough attending bronchitis, a cough which, while the person is up and moving about during the day causes almost no inconvenience, but as soon as the recumbent position is assumed, commences with greater or less severity and continues sometimes for hours, depriving the sufferer of much needed repose, and proving a source of annoyance both to patient and physician. Accordingly, I began using the following, viz.: R.—Fl. ext. grindeliæ robustæ; fl. ext. yerbæ santæ. ʒʒ f ʒj; syrapi toltanæ vel. simplicis, q. s. ad f ʒ iij.—M. Sig.—3 j to 3 ij every hour or two when needed for cough.

This combination gave very satisfactory results in the great majority of cases; indeed, in some instances it acted like a charm, instantly controlling the cough and relieving the tickling in the throat and bronchial tubes. The preparation is free from the unpleasant effects which frequently follow the use of cough mixtures containing opium.

### SEA-SICKNESS.

"Over the crystal waters she leans in careless grace," says a recent poem. Another case of sea-sickness. Tit-Bits.

## DIPHThERIA. .

Dr. G. A. Tye, of Chatham (*Canada Practitioner*), says: We possess two means—prevention and cure—which enable us to lessen its ravages. Our greatest power at present lies in the former. It is a great satisfaction that at last we have a system of State medicine established in Ontario, and that legislative enactments now guard the birthright of every subject's health.

The predisposing causes are telluric, meteorological, and individual. Amongst the former are low, damp situations. Houses are placed close to the ground, with no provision for currents of air to pass beneath them to dry the soil or expel noxious vapors. Houses too closely surrounded with plants, shrubbery, or trees, are favorable to the development of low organisms. River flats, sites of old saw mills where there is much decomposing sawdust, seem to be prejudicial.

What are the modes of communication?

It is communicated by the direct passage of morbid material from a diseased throat to one previously healthy. The history of tracheotomy presents some lamentable illustrations of this fact. It may be communicated by the inhalation of germs existing in an insanitary locality, although no case of the disease then exists there. It is communicated by germs wafted in the air, and that for a considerable distance; and they produce the disease, more especially when a predisposition exists, so that many suffer whose sanitary surroundings are apparently perfect; so that the clean, as well as the unclean, may be obliged to share the calamity.

The paper closes with the selections of cases which the author believes sustain these propositions.

INFLUENCE OF TREATMENT ON THE GONOCOCCUS OF  
OPHTHALMIA NEONATORUM.

From the *Cincinnati Lancet and Clinic*.—According to our present views of contagion the purulent conjunctivitis of new born children must be considered as a type of a contagious affection. Neisser has discovered the gonococcus characteristic of the blennorrhagic discharge, as well in the virulent catarrh of the genital mucous membranes, as in the purulent catarrh of the conjunctiva.

All the efforts of the surgeon should be directed toward the sterilization of the purulent secretion; and the transformation of an essentially malign form of conjunctivitis into a milder form, by all the means at his disposal.

Clinical observations prove that our therapy responds to this desideratum. In the cases in which the treatment has been properly carried out, the unfortunate alterations of the cornea have not occurred. This treatment consists in the use, every two hours, of a solution of sublimate 1-5000, thoroughly washing out the conjunctival cul-de-sac; cold compresses, bits of linen kept on ice, applied at regular intervals, and employed in the aggregate during six or eight hours of the day; and cauterization with the mitigated stick.

In the cases treated in this way and examined repeatedly and carefully under the microscope it was observed that the amelioration and favorable termination march exactly in concert with the diminution and final disappearance of the gonococci.

This result is due to three factors: Cold, cauterization and antiseptics.

## PHRENOLOGY.

Phrenologist.—“Your bump of imagination is abnormally large, sir. You should write poetry.”

Citizen.—“I do write poetry. Only yesterday I took a poem to an editor, and that bump you are feeling of is where he hit me. Don't bear on it so hard.” Tit-Bits.

## THE CARE OF THE VOICE OF PROFESSIONAL VOICE-USERS.

Dr. THOMAS F. RUMBOLD, of St. Louis (*St. Louis Med. and Surg. Jour.*), in the course of an elaborate paper on this subject, says the course pursued by the following singers and speakers is recommended:

Labatt, the Swedish tenor, is in the habit of eating a couple of salted cucumbers before appearing on the stage. He looked upon this as a strengthening remedy for the voice.

Wachtel, the tenor, takes an egg beaten up with a little sugar. He considers that this softens the voice, and is, no doubt, very good.

Madame Sontag used to take sardines between acts.

Madame Desparée soothes her throat with plain warm water.

Madame Cabel eats pears.

Adelina Patti prefers a bottle of seltzer water.

Ngaldi has a preference for plums.

Trevelli Bettini eats strawberries.

One of my patients, a noted star actor, takes a cup of warm coffee with cream and sugar and a warm boiled potato with a little salt, between acts.

The following is the experience of an old amateur of New York City:

"It appears rational to avoid anything before singing that would tend to irritate the throat."

## WHAT A BABY CAN DO.

It can wear out a \$1.00 pair of kid shoes in twenty-four hours.

It can keep its father busy advertising for a nurse-girl.

It can occupy both sides of the largest-sized bed manufactured.

It can cause its father to be insulted by every landlord in the country who never rents to parties with children.

It can look like a fiend just when its mother wants to show "what a pretty baby it is."

It can drive every servant away from the house.

It can keep you awake all night and not half try.

It can go to sleep "like a little angel," and just as mamma and papa are starting for the theatre it can wake up and stay awake until the last act.

It can make the old bachelor in the adjoining room swear his soul into sheol in five minutes.—*Exchange*.

## COUGH MIXTURES FOR CHILDREN.

From the Out-Door Department of Public Charities, New York (Bellevue).

*Cough Mixture for Infants*.—R. Tinc. opii camp., Spts. ammon. arom., aa f 3 j; Ext. ipecac., fl., f 3 ss; Syr. pruni virgin., f 3 j; Aquæ, q. s. ad f 3 iij. M. Dose, a teaspoonful.

*Mistura Ammonii Carbonatis*.—R. Ammonii carbonat., 3 ss; Syr. senegæ, f 3 iv; Syr. ipecac., f 3 iij; Syr. tolu, f 3 iv; Ext. glycyrrhizæ, 3 ss; Aquæ cinnamomi, q. s. ad f 3 iv. M. Dose, a teaspoonful for children.

*Mistura Ammonii Chloridi*.—R. Ammonii chloridi, 3 ss; Potassii chlorat., gr. xl; Syr. senegæ, f 3 iv; Syr. ipecac., f 3 iij; Syr. tolu, f 3 iv; Ext. glycyrrhizæ, 3 j. Aquæ cinnamomi, q. s. ad f 3 iv. M. Dose, a teaspoonful for children.

## CAN TUBERCULOSIS BE COMMUNICATED BY VACCINATION?

Investigations made by Dr. J. ACKER (*Centralblatt für Allgem. Gesundheitspflege*), upon some phthisical subjects, whose sputa contained abundant bacilli, showed that the vaccination-vesicle did not contain bacilli in its lymph. He believes, moreover, from other experiments, that even when bacilli are present no danger can arise from the very superficial wound of the skin made in vaccinating.—*Phil. Med. Times*.

## FRECKLES.

Dr. C. HEITZMAN, of New York (Amer. Derm. Ass'n, 1885), uses an ointment recommended by Wertheim of Vienna: R. White precipitate and subnitrate of bismuth,  $\mathfrak{ss}$  3i; glycerine ointment,  $\mathfrak{z}$ i. M. Apply a thin layer every other night for from four to six weeks.

Dr. WIGGLESWORTH, of Boston (loc. cit.), has used for fifteen years:—R. White precipitate and subnitrate of bismuth  $\mathfrak{ss}$ , 10 parts; vaseline, 100 parts. M.

## VACCINATION AND SMALL-POX.

Dr. STEPHEN BREDIN, of Franklin, Pa. (*N. Y. Med. Jour.*, Sept. 12, 1885), reports cases illustrating the benefit of vaccination after the beginning of small-pox. They corroborate the views set forth in an editorial in the same journal, Aug. 8, 1885; *i.e.*, "favor a resort to prompt and efficient vaccination as a hope of modifying a terrible disease, especially if resorted to early."

## FALLING OF HAIR FROM SEBORRHOEA.

Dr. C. HEITZMAN, of New York (proceedings Amer. Derm. Ass'n, 1885), says, the following application has given him fair results: A ten or twenty per cent. ointment of crude oleum rusci in vaseline and paraffin.

## DEAD SHOT FOR TAPE-WORM.

BERNARD PERSCH says that after having given a fair trial to all the taenicides usually recommended, including kouso, male fern, pomegranate, etc., he found nothing to equal the following treatment, which is as certain as anything in medicine generally gets to be. In the morning early he gives a drop of croton oil dissolved in chloroform and the solution mixed with an ounce of glycerine. On retiring that same night, the patient is given a mild laxative. The *Rev. des Scien. Med.* says that the treatment never fails, the taenia being rapidly and completely expelled.—*St. Louis Med. and Surg. Jour.*

## PAINLESS TOOTH EXTRACTION.

Dr. HEPBURN, in the *Independent Practitioner*, says that teeth can be extracted without pain in the following manner: The tincture of purified extract of cannabis indica is diluted with from three to five parts of water. This is applied to the gums by rubbing with the finger dampened with the solution. The forceps are also dipped into the solution before applying them to the teeth.—*N. Y. Medical Times.*

## ANTISEPTIC DOUCHE.

In the *Boston M. and S. Jour.*, Dr. Z. B. ADAMS thus sums up his objections to the routine use of the antiseptic douche in midwifery: "It is artificial; it is meddlesome; it is of doubtful utility; and it may be hurtful and even fatal."

Dr. OLIVER WENDELL HOLMES says that a doctor's patients must put their tongues out, and a doctor's wife must keep her tongue in.



# 80,000 Physicians prescribe HYDROLEINE

(HYDRATED OIL.)

For Consumption and Wasting Diseases, producing immediate increase  
in Flesh and Weight.

**FORMULA ; Each Dose of Two Teaspoonfuls equal to 120 Drops, contains :**  

Pure Cod Liver Oil.....	80 in (drops)	Soda.....	1-3 Grain.
Distilled Water.....	35 "	Boric Acid.....	1-4 "
Soluble Pancreatin.....	5 Grains.	Hyocholeic Acid.....	1-30 "

**HYDROLEINE** furnishes to the stomach that requisite which is certain to allay further waste of the body, and insures to the patient an increase of flesh and weight. It contains 67 cent. pure Norwegian Cod Liver Oil. In nutritive value, each bottle exceeds ten times the same bulk of Cod Liver Oil.

**HYDROLEINE** is palatable and readily tolerated by the most delicate stomachs, when the pure oil or the most carefully prepared emulsions are rejected.

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The principles upon which this discovery is based have been described in a treatise on "The Digestion and Assimilation of Fats in the Human Body," by H. C. BARTLETT, Ph.D., F.C.S., and experiments with cases illustrating the effect of Hydrated Oil in practice, are concisely stated in a treatise on "Consumption and Wasting Diseases," by G. OVEREND DREWRY, M.D. Copies of these Works sent on Application.

For information of the good results obtained from the use of **HYDROLEINE**, we respectfully refer to a few of the many thousands of Physicians who have prescribed it.

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## KIDDER'S Wine of the Purified HYPOPHOSPHITES OF LIME AND SODA, (Dr. CHURCHILL'S FORMULA.)

Physicians will find this Wine an efficacious remedy, where disease indicates the administration. Of all preparations of Phosphorus the Hypophosphites are the most easily assimilated, thus rendering it a superior medicine in an impoverished condition of the system, as in Phthisis, Nervous Depression, Scrofulous Ulceration, Debility from prolonged lactation, and in all diseases in which the vital forces are impaired. The combination with pure wine adds its Tonic action, and makes it palatable and acceptable to the most delicate stomach. This preparation *alternated* with **HYDROLEINE** (Hydrated Oil), will greatly aid in building up the debilitated system. Put up in a 12 ounce bottle, Price, at retail, \$1.00.

## KIDDER'S DIGESTYLIN.

FOR INDIGESTION AND DYSPEPSIA.

**FORMULA ; Each Dose of Two Teaspoonfuls contains :**  

Pure Pepsin.....	10 Grains.	Pure Ptyalin.....	3 Grains.
Pure Pancreatin.....	6 "	Choleate of Soda.....	1-4 "

A Potent Remedy for Indigestion, Acute and Atonic Dyspepsia, Chronic and Gastro-Intestinal Catarrh, Vomiting in Pregnancy, Cholera Infantum, and in convalescence from Acute Diseases. It is palatable and acceptable to the stomach. Retail Price, \$1.00 per Bottle (12 oz.).

A sample bottle of this preparation will be sent to any Physician who will pay carriage.  
 Messrs. Wm. F. Kidder & Co.—Sirs: I have been troubled many years with periodical Dyspepsia. The intervals lately have become shorter and more distressing. A sample of your Digestylin fortunately came to hand when I was suffering severely from an attack. The formula looked promising, and I thought I would give it a trial. It acted immediately and almost like magic. The taste was pleasant, and I could feel it touch the spot. The fulness, weight and pain that usually followed eating, disappeared. I did not suffer from acid eructations which with Heartburn had so afflicted me. I am satisfied that in most forms of Dyspepsia your Digestylin is just the thing. I have been extensively engaged in Practice for nearly 40 years, and I have never found anything that acted so quickly and so satisfactory as did your Digestylin in my case. Respectfully,  
 HENRY S. FIRTH, M.D., 203 South 6th St., Brooklyn, N. Y.

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 Messrs. Wm. F. KIDDER & Co.—Gentlemen: Your agent left me a bottle of Digestylin in order that I might give it a trial in a case of stomach trouble running through a period of five or six years. The medicine proved very effective, relieving patient more than any medicine before taken, and she has used many different remedies.  
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 Messrs. Wm. F. KIDDER & Co.—Gentlemen: I have used your Digestylin and find it excellent in Indigestion and Dyspepsia.  
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**Differs Essentially from all other Beef Tonics.**

**GOLDEN'S Liquid Beef Tonic** is endorsed by scores of physicians, who are growing to realize more and more its importance in repairing, in accordance with the principles of dietetics, the **waste which disease entails**. It consists of the extract of Beef (by Baron Liebig's process) spirit rendered non-injurious to the most delicate stomach by extraction of the Fusel Oil, soluble Citrate of Iron, Cinchona, Gentian, and other bitter tonics. An official analysis of this preparation by the eminent Chemist, ARTHUR HILL HASSALL, M. D., F. R. S., and an endorsement by the late SIR ERASMUS WILSON, F. R. S., are printed on the label of each bottle.

As a **nutrient**, and a **reliable tonic** in all cases of debility and weakness, Malarial Fever, Anæmia, Chlorosis, Incipient Consumption, etc., it is the best preparation ever used. It acts directly on the sentient Gastric Nerves, stimulating the follicles to secretion, and gives to weakened individuals that first prerequisite to improvement — an appetite. It strengthens the nervous system when unstrung by disease, and has been employed with remarkable success as a remedy for Drunkenness and the Opium Habit.

**Its Range of Action Embraces all Cases of Debility.**

In order that physicians may form some idea of the nature of its ingredients, I will upon application in person, or by letter (enclosing a card), send a sample bottle of GOLDEN'S LIQUID BEEF TONIC to any physician in regular standing, in the United States. Please ask your Dispensing Druggist (if he has not already a supply) to order it. In prescribing this preparation, physicians should be particular to mention "GOLDEN'S"—viz.: "*Ext. carnis, fl. comp. (Golden's).*" It is put up in pint bottles, and can be had of Wholesale and Retail Druggists generally throughout the United States.

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## GLENN'S Sulphur Soap.

ALL physicians know that **skin diseases** are more or less constitutional, or dependent upon some specific poison in the blood, which, if eradicated by internal treatment, needs something to remove its appearance from the surface. Experience has proved that the best possible aid in the accomplishment of this end is obtained by the use of **Sulphur in soap**. GLENN'S SULPHUR SOAP is the best combination of its kind, and the one now generally used. It is for sale by all Druggists, at 25 cents a cake, or 3 cakes for 60 cents.

## CONSTANTINE'S PINE TAR SOAP

Has been on trial among physicians for very many years as a Toilet Soap and Healing Agent, and its superior virtues have been unanimously conceded in all cases where the use of tar is indicated. Unsolicited expressions of its excellence have been received from the Medical Faculty generally. IT IS "THE BEST TAR SOAP MADE. None genuine unless stamped "A. Constantine's Persian Healing Pine-Tar Soap." For sale by all Druggists.

"Samples of either of the above-named Soaps will be sent free upon application in person or by letter (enclosing card) to any physician in regular standing in the United States. C. N. Crittenton, 115 Fulton Street, New York. Please mention "THE QUARTERLY EPITOME."

**QUARTERLY EPITOME**  
OF  
**AMERICAN PRACTICAL MEDICINE AND SURGERY.**  
**WESLEY M. CARPENTER, M.D., Editor.**

This number closes the *sixth* volume of the **QUARTERLY EPITOME**. The steady increase in the list of subscribers must be accepted as evidence of the growing interest which the profession has in American medical literature. Our country possesses many active and competent men in every department in medicine, whose contributions are equal in value with any which reach us in foreign medical journals.

The increasing demand for the earliest medical information has led to a new departure in our publication, and, beginning with January, 1886, it will appear as a monthly. Important changes affecting the interior will be made. It is not our purpose to make a complete transposition but a generous competition will prompt the clipping of a few adhesions, and favor the greatest success in our special field of work, namely, furnishing a summary of what has been published by the medical men of this continent.

One important change will consist in making the pages two-columned, which will add very materially to the comfort of the readers. Each number will contain fifty pages—the same proportion as before—selected with special reference to practical interest and scientific value. Many thanks to our readers for their liberal patronage, which will be continued by all who wish to keep abreast with the rapid advancements in medicine. Although the above will necessarily increase the expense of publishing, the terms of subscription will remain unchanged.

Is typhoid fever ever of spontaneous origin? was discussed in the Section in Practical Medicine of the N. Y. Academy of Medicine, in October, and the drift of the remarks is

worthy of notice. The discussion was participated in by Drs. J. H. Emerson, S. Oakley Van der Poel, W. H. Thomson, A. A. Smith, A. Jacobi and the Chairman of the Section, Dr. Alfred L. Loomis.

There was, substantially, a unanimity of opinion with reference to the essential cause of the disease and its mode of propagation. In the first place, no one was willing to adopt the theory that the essential cause of typhoid fever is a micro-organism, but all were willing to wait for further evidence concerning the typhoid bacillus. Dr. Jacobi expressed the opinion that, with the exception perhaps of anthrax, it had not yet been proven that any disease is caused by a specific bacillus.

With reference to the mode of propagation, the opinion was unanimous that typhoid fever is not contagious; that is, in the sense of conveying it from one person to another by direct contact, as is small-pox, etc. But that it could be transmitted or communicated to the healthy through the agency of media (drinking water, milk, etc.) that had been poisoned with dejecta from one sick with typhoid fever, was generally accepted as having been established beyond dispute.

So far, then, as this single discussion reveals, it does not appear that our knowledge of the essential nature of the disease during the last twenty years has advanced very far. There can be no reasonable doubt, however, that our knowledge concerning its development, propagation, and prevention, has been very much increased, and it stands as a lasting reproach if the possibility of stamping it out as soon as it appears is not made known and put into practical effect.

An interesting discussion took place recently in the Section in Practice of the N. Y. Academy of Medicine on the question, Is croupous or lobar pneumonia an inflammation or the local manifestation of a fever?

It was especially interesting from the fact that Drs. W. H. Draper and W. H. Thomson discussed the same question before the Academy twenty years ago, and participated in the discussion in November last.

The views of these gentlemen have been so modified during the period between the two discussions that, at the present time, neither has any pronounced opinion to offer. Dr. Draper thought that the limits of our knowledge compelled us to regard pneumonia as an inflammatory disease, but beyond that we were unable to go. Dr. Thomson inclined toward the view that pneumonia is an infectious disease.

Dr. Kinnicutt favors the opinion that pneumonia is caused by a micro-organism. Dr. Jacobi does not believe that it is necessarily caused by bacteria; that there are other causes; and that cold weather, with moisture and winds, especially favor its development. Dr. Delafield regards the disease as a typical example of a local inflammation, and not an infectious disease, and that the modifications of the process depend upon the age and condition of the patient and the condition of the lung inflamed.

During the last quarter three new journals have appeared. The *Medical Press* of Western New York, published at Buffalo and edited by Roswell Park, M.D., assisted by M. D. Mann, M.D., Ely Van DeWarker, M.D. and W. J. Herriman, M.D. The editorial staff has the ability and, doubtless, the facilities for making a first-class journal.

The *Cleveland Medical Gazette*, a monthly journal of medicine and sur-

gery. A. R. Barker, M.D., editor, and S. W. Kelly, M.D., associate editor. This is a revival of a publication which appeared first in July, 1859, but was suspended during the war. Its resurrection note is clear and penetrating and may be heard over the continent.

The *People's Health Journal*, of Chicago, designed to be a popular monthly magazine, devoted to health, hygiene and preventive medicine, contains many interesting items in its sixteen departments, edited by Drs. L. D. and S. Ida Wright Rogers. In the meantime our esteemed contemporary, the *New Orleans Medical and Surgical Journal*, has donned a new dress which looks very neat.

#### BOOK NOTICES.

THE MANAGEMENT OF LABOR AND OF THE LYING-IN PERIOD. By Henry G. Lundis, A.M., M.D., Prof. of Obs. in Starling Med. Coll., etc., etc. Philadelphia: Lea Brothers & Co. 1885. Price, \$1.75.

A most excellent *resumé* of the subject will be found in this neat little volume, consisting of over 300 pages, with 28 illustrations.

The author has written especially to graduates, and has, therefore, presumed upon a previous knowledge of the reader, with the anatomy and physiology of the parts discussed.

It may be said of this work that it is concise, practical, and, upon the whole, sound.

He begins his first chapter with a sharp attack upon that class of obstetricians who declare as their motto, "Meddlesome midwifery is bad," and styles this aphorism as "a tower of refuge for ignorance."

He considers the truly ideal labor as an affair of but two or three hours at the most. He does, however, make allowances for differences in temperature and primiparæ.

In regard to early assistance, he says: "We interfere not with nature, but with an unnatural condition." It is timely interference which he so very properly advocates.

Although we are accustomed to hear a great deal said among practitioners concerning the perineum, it is surprising what comparative inattention this very important subject has heretofore received in the most of our text books.

Dr. Landis, who has devoted over eight pages to the discussion of the "Care of the Perineum," has treated of the subject in such a scientific and practical way as is deserving of especial credit. He has carefully noted the distinction to be made between elasticity and cohesiveness of the perineum.

Of ergot, he says: "who casts it away altogether as an obstetric remedy will have few regrets afterward." He objects to the use of anæsthetics, especially chloroform, on the following grounds: (1) risk to the child; (2) labor is protracted; (3) the risk of hemorrhage; (4) imperfect contraction, "increasing the danger of suffering from uterine thrombosis, septicæmia and all the diseases of the puerperal period."

The index is a rather meagre one, and will but slightly enhance the value of the book as a work of reference.

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**DISEASES OF THE NOSE AND THROAT.**  
By Charles E. Sajous, M.D., Lecturer on Rhinology and Laryngology (Spring Course) in Jeff. Med. Coll., etc. Illustrated with 100 chromo-lithographs, and 93 engravings on wood. Philadelphia: F. A. Davis, Att'y, publisher. 1885.

This book is made of lectures delivered during the Spring Session of the college. It is illustrated with one hundred chromo-lithographs, and ninety-three engravings on wood.

The reviewer is not prepared to admit that the colored illustrations convey either a very practical or exact idea of the conditions designed to be represented. But it is not to be overlooked that chromo-lithographs in general, for medical works, are exceedingly liable to miscarry with reference to their original purpose. Red is an attractive color, and that may be the reason why artists are so prone to use it in abundance.

The text contains much of the matter usually found in works on the same subject, and it may be a question whether or not it has been presented in any more acceptable shape than that with which the profession is already reasonably familiar.

Being a recent publication, the author has had one advantage, namely: the opportunity to incorporate in the text the virtues of the hydro-chlorate of cocaine. Besides, there are descriptions and illustrations of several instruments devised by the author, together with modifications of "other men's designs," and two new names for diseases, which renders the book a necessity if one wishes to keep informed concerning the "strides" in this department.

The fact that the author is indebted to the writings of thirty-five different laryngologists, is the most substantial evidence that the book contains valuable material and is full of originality, and should find its way to the shelves of every practitioner of medicine.

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**MOISTURE AND DRYNESS; OR, THE ANALYSIS OF ATMOSPHERIC HUMIDITIES IN THE UNITED STATES.** By Charles Denison, A.M., M.D., Prof. of Diseases of the Chest, Univ. of Denver Coll. Chicago: Jansen, McClurg & Co. 1885.

This is an essay read before the American Climatological Association in 1884, containing numerous tables,

and fully illustrated with a series of excellent maps, prepared by the aid of the signal service reports. Texas does not seem to have come in for consideration. Whether this is because that section of country has neither dryness nor cloudiness, or whether its climate is so salubrious as to be beyond ordinary estimate, does not appear. There is not much doubt that Daniels will be after Denison with reference to this omission. Otherwise the pamphlet represents a deal of labor and contains a fund of information.

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**THE PHYSICIAN'S HAND-BOOK FOR 1886.** By William Elmer, M.D., and Albert D. Elmer, M.D. New York: W. A. Townsend, Publisher.

The twenty-ninth year brings this visiting-list for physicians with its numerous attractions. As usual it appears in two forms; with and without introductory reading matter. These introductory pages, however, are worth more than twenty-five cents to any physician, there being only two shillings difference in the price; that is—with, \$1.50; without, \$1.25.

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**TRANS. OF THE TEXAS STATE MEDICAL ASSOCIATION** (Seventeenth Annual Session), 1885. Austin: Printed for the Association.

The volume has a tasty and ornamental cover, and contains a goodly quantity of commendable medical literature. Surely, the enterprise of our brethren of the Lone-Star State may be cited as an example worthy of emulation by State Medical Societies throughout the country.

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**THE PHYSICIAN'S VISITING LIST FOR 1886.** Philadelphia: P. Blakiston, Son & Co.

Compact, convenient, comprehensive, and already well known to the profession.

**EPITOME OF DISEASES OF THE SKIN.** Philadelphia: J. B. Lippincott Company. 1886. Price, 60 cents.

The manual is an abstract of a course of lectures delivered in the Univ. of Penn., by Louis A. Duh-ring, M.D., and reported by Henry Wile, M.D., his clinical assistant.

The name of the author is a sufficient guarantee for the excellence of the lectures, and Dr. Wile's experience amply qualified him for a satisfactory performance of his part of the work.

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**MILK ANALYSIS AND INFANT FEEDING.**

By Arthur V. Meigs., M.D., Phys. to the Penn. Hosp. and to the Children's Hosp. Philadelphia: P. Blakiston, Son & Co. 1885. Price, \$1.

A large percentage of this monograph has already appeared in medical journals under the head of transactions of the Philadelphia County Medical Society and the College of Physicians of Philadelphia. It is a practical treatise on the examination of human and cow's milk, etc., and contains directions as to the diet of young infants. Those interested in this department of medicine will here find excellent assistance in the management of this very important class of cases.

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**TRACTS ON MASSAGE.** Translated from the German of Reibmayr, with Notes. By Benjamin Lee, A.M., M.D., Ph.D. Philadelphia. 1885.

This is the second of the series, and is on the "Physiological Effects of Massage." The translator is enthusiastic in his praise of "this important therapeutic means," and for those who are interested in this work the second of the series will prove valuable.

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J. H. Chambers & Co., St. Louis, announce a treatise on diphtheria, translation from the French.

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# PUBLISHER'S DEPARTMENT.

## NEWS AND MISCELLANY.

**HYDROPHOBIA INOCULATION.** — M. Pasteur announces that he has discovered a method of inoculation against hydrophobia which not only secures against the liability to contract the disease from bites by rabid animals, but also prevents the development of the disease in persons already bitten. He is said to have already operated on several persons who have been bitten by mad dogs, with great success; though how the "success" of the operation can be determined until considerable time has elapsed, is by no means clear. The accounts that have reached this country concerning the process are rather vague; but it appears to consist in inoculating the patients with portions of the spinal marrow of rabbits which in their turn have been subjected to the influence of hydrophobic virus of varying degrees of intensity. This matter is claimed to produce a mild attack of rabies in the individual, protecting him from the effects of the more powerful poison of rabid animals in the same manner that the mild virus of cow-pox protects the system against its dreaded relative, the small-pox. It is sincerely to be hoped that future reports will confirm the discovery. We are of the opinion, however, that much further investigation will be necessary to confirm the discovery; for many other diseases of animals simulate true hydrophobia, and a large proportion of those bitten by animals actually affected will never contract the disease, whether "inoculated" or not. We shall await further reports with interest. — *Popular Science News*.

**HOSFORD'S ACID PHOSPHATE IN NERVOUS HEADACHE.** — Dr. J. E. Morris, Horine Station, Mo., says: "I have made a satisfactory test of Hosford's Acid Phosphate in a pronounced case of nervous headache, and am glad to say that the result was more than was expected. I believe the cure is permanent. It is not my custom to endorse any compound that is not official, but I believe the Phosphate is a thing of real merit, and that it is valuable in all cases where nerve tonics are indicated." — *The Am. Med. Jour.*

**PREMATURE RUPTURE OF MEMBRANES.** — Dr. F. L. Putt, of Middlebury, Ind., writes: "Please permit me to say to Dr. R. M. Cole, of Idah Springs, Cal., that in his case of premature rupture of membranes he does not state if any water escaped when true labor did come on. On the presentation I have quite frequently met with cases where there was dropsy (so to speak) of the membranes covering a foetus, which passed away one, two, or three weeks before true labor came on, and when labor did come a normal quantity of fluid escaped; again, where the foetus assumes a malposition, with feet or knees to appear, the membranes are ruptured in a valve shape and all the water escaped with no expulsion pain. In such cases prudence dictates patience, and the wise and frugal practitioner sits by and consoles the expectant mother to give herself no worry, as such accidents are more of a relief than a source of anxiety." — *Medical Record*.

**SOLUBLE COATED PILLS.** — These pills, made by Warner & Co., are unsurpassed in their medicinal qualities, as only the best materials enter into their composition, while the most scrupulous care is exercised in their manufacture. The extended laboratory experience of these well-known chemists comprises a period of more than a quarter of a century, and has enabled them to arrive at results otherwise unattainable. Their scientific method of coating remains permanent and avoids the necessity for drying the mass so hard as to render it insoluble or inert. This method, which is their own, is fully recognized and appreciated, and is demonstrated by the confidence reposed and the success attained. We wish to impress upon the minds of prescribers that their soluble-coated pills will produce the effects expected in connection with the drug employed, and that they can confidently rely on whatever pharmaceutical preparations they produce will be of the highest class. — *Medical Gazette*.

**MALARIAL GANGRENE.**—Dr. Blanc, in a contribution to the study of malarial gangrene, concludes:

1. Cold and serious pulmonary disease should be placed among those causes which play an important part in the production of local asphyxia and malarial gangrene.

2. Exposure of those suffering from malaria—their sudden transition from warm to cold countries—may occasionally produce local asphyxia and malarial gangrene.

3. The antiperiodics, quinine and arsenic, seem to constitute the best treatment for the complications attending the disease.

They may arrest and cause the local asphyxia to disappear completely; they may check and limit the gangrene, but here the specific action seems less sure and rapid than in the state of asphyxia. The well-known difference in the action of quinine upon visceral lesions, according as they are digestive or sclerotic, is here observed, though in a mild degree.

4. From a surgical point of view in the treatment of malarial gangrene it is advantageous to operate only when the progress of natural elimination has ceased.

The gangrene being dry, danger of infection is remote. The difficulty of at first distinguishing parts which are mortified and those simply the seat of prolonged local asphyxia, is a further reason for tardy operation.—*Archives de Médecine et de Pharmacie Militaires.*—*Medical News.*

**LIQUID BEEF TONIC.**—Colden's Liquid Beef Tonic is indorsed by scores of physicians, who are growing to realize more and more its importance in repairing, in accordance with the principles of dietetics, the waste which disease entails. It consists of the extract of Beef (by Baron Liebig's process) spirit rendered non-injurious to the most delicate stomach by extraction of the Fusel Oil, soluble Citrate of Iron, Cinchona, Gentian, and other bitter tonics. An official analysis of this preparation by the eminent chemist, Arthur Hill Hassall, M. D., F. R. S., and an indorsement by the late Sir Erasmus Wilson, F. R. S., are printed on the label of each bottle.—*St. Louis Courier of Medicine.*

**COCA-LEAF CHERROOTS.**—I have received the following letter from Messrs. Parke, Davis & Co., of Detroit: "Referring to your article on 'Coca-Leaf Cigars and Cigarettes,' published in the *Medical Times*, (October 19), we beg leave to call your attention to the enclosed samples of coca cheroots, which we have had made to meet the extensive demand you have created. A cheroot can be manufactured much cheaper than a cigar, and will, of course, retail at a lower price in proportion. Please tell your medical friends that we would be happy to send samples to those who desire to try them." In relation to the above letter, it seems to me that the cheroot fills every indication for the cigar, and I take pleasure in referring the profession to this well-known house, who will supply them with the very best quality of cheroot containing carefully-selected coca.—*Dr. F. E. Stewart in Med. Times.*

**A WELL-TRIED ANTISEPTIC.**—There has been a fashion in antiseptics; first carbolic acid held sway; it was dethroned by iodoform, and it was displaced by corrosive sublimate which is now the rage. Fatal results in cases—death by poisoning—was the cause of the disuse of carbolic acid and iodoform, and it will not be long before corrosive sublimate is abandoned. Listerine is a powerful antiseptic and non-poisonous, and can be used ad libitum either externally or internally without fear of dangerous results. It is indicated in all cases where an antiseptic is required. As a dressing for wounds and washing out the air in purulent inflammation of that organ specialists declare it to be valuable. In irrigating sinuses and washing out cavities and abscesses, and in vaginal and urethral injections it has been found useful. In consumption, cancer, diphtheria, scarlet fever and infectious diseases it has been found remedial. It has been tried and commended by the principal surgeons and physicians of the United States. A comprehensive formula-book, "How to Use Listerine," has recently been prepared for physicians' reference, and is presented to them upon requests by the Lambert Pharmaceutical Co. of St. Louis.—*Med. Summary.*

**TOBACCO AND THE PULSE.**—Dr. Trotski publishes the results of a number of observations made by him to ascertain the effects produced on the temperature and pulse by smoking. He has found that in every case, varying according to the condition of the individual, there is an exhilaration of the pulse rate and a slight elevation of temperature. It appears, in fact, that if the average temperature of non-smokers were represented by one thousand, that of moderate smokers would be one thousand and eight, and while the heart in the former case was making one thousand pulsations, in the latter it would beat one thousand one hundred and eighty times—hence the danger of tobacco smoking.—*Med. Notes, N. Y. Tribune.*

**COD LIVER OIL WITH HYPOPHOSPHITES.**—As a nutrient means of checking and repairing bodily waste, and remedying disease of the throat, chest and lungs, Scott's Emulsion has long held the foremost rank among preparations of cod liver oil. The time-honored firm of Scott & Bowne owe, in no small degree, their leading position in the trade, which they have held for the last twelve or fifteen years, to the superior character of this article. In it not only is the disagreeable flavor and nauseating effect of cod liver oil in its crude state overcome, so that it is pleasant and palatable, but it holds in combination the hypophosphites of lime and soda, a most important remedial agent and adjunct to the cod liver oil. The perfect chemical union of this valuable combination as prepared by this firm give it an exalted position in pharmacy, and brings this hitherto valuable but almost useless article (on account of its repulsive taste and odor) into practical utility for supplying to the depleted system iodine, bromine and phosphorous in the most desirable and acceptable form. The certificates of some of the most eminent physicians and analysts in Europe and America, in both of which countries it is widely esteemed by the profession and the public, attest both its efficacy and its chemical purity. It is perhaps useless to enumerate the diseases for which these two combined specifics are of great remedial value, it is sufficient to

say that this Scott's Emulsion of Cod Liver Oil and Hypophosphites stands pre-eminently at the head of the list, and by its superior healing and strengthening powers it has grown and reached out till it has covered many countries of the globe, and can be found even in some of the remote corners of the earth.—*Medical Examiner.*

**PRECOCIOUS MENSTRUATION.**—Dr. Denver reports in the *Gazeta Medica di Bahia* the case of an infant who began to menstruate at the age of two months. The menses appeared regularly every four weeks, and continued for four or five days. On one occasion they ceased for a period of three months, and the child became ill, but recovered her usual good health upon their restoration. She was examined when two and a half years old. She weighed forty pounds, and her face was that of a girl ten or twelve years old. The breasts were the size of small apples, the mons veneris was covered with hair, and the labia minora and majora were well developed.—*The Medical Record.*

**ELECTRICITY IN OBSTETRICS.**—W. T. Baird, M.D., in an able treatise under this caption, in *American Journal of Obstetrics*, recognizes the importance of electricity in obstetrics of the reliability in electrical APPARATUS, says: Any good, reliable induction apparatus will answer, but it must be reliable and in perfect order, otherwise it will most likely fail at the very moment its services are most required. I use one which was manufactured by Dr. Jerome Kidder for Dr. Heed and myself sixteen years ago, and it is still reliable, although having been in constant use during all that time. This is the one he calls "The Physician's Visiting Machine"; but when it is not convenient to carry one so bulky, I use a "Pocket Induction Apparatus," also manufactured by J. Kidder. This is very convenient, and gives all the current which could be required in any case. The only objection to it is that, if its use is required for longer than one hour, it will be necessary to recharge it.—*Medical Times.*

**BORAX AS AN INTERNAL DISINFECTANT.**—In the *Union Médicale*, Dr. Cyon confirms the statement made by Dumas in 1878, that borax is possessed of most valuable antiseptic powers. Independently of its value for the preservation of food, it is a great preventive of infectious diseases, and may be employed internally to ward off epidemics. It may be taken for months or years with impunity, and constitutes a valuable prophylactic. Dr. Cyon states it is a remarkable fact that in all epidemics of cholera the workmen in boracic acid factories have always escaped the disease. The usual dose is five or six grammes (75 to 90 grains) daily, taken for an indefinite time.—*Cin. Lancet and Clinic.*

**MENTHOL, AS A REMEDY FOR NERVOUS PAINS.**—Among the many discoveries in chemistry of late years Menthol is certainly one of the most important. It has been known to chemists to some extent for many years, but only gained commercial importance within the last year or so, by reason of its great consumption, in the manufacture of Menthol cones or pencils, which have proved the most convenient and practical way of using this valuable article by simply rubbing it over the affected parts. In cases of headache, neuralgia, toothache, face-ache, earache, faintness, rheumatism, and sciatica its action is simply wonderful. It can also be taken internally, and for derangements of stomach and bowels it has proved most valuable, especially in cases of cholera morbus, diarrhoea, summer complaints, etc., it having great antiseptic properties. Much praise is due to Messrs. Dundas, Dick & Co, manufacturing chemists of this city, for having been the first to introduce this article to the drug trade of the United States, in the form of cones, described above, under the name of "Mentholine," which is composed of absolutely pure Japanese Menthol only.—*The N. Y. Times.*

**ESSENCE OF PEPPERMINT AS AN APPLICATION TO BURNS.**—*Nouveaux remèdes* quotes the *Australasian Chemist and Druggist* to the effect that essence of peppermint, painted on a burn, causes the pain to cease at once,

**ARTIFICIAL LIMBS.**—R. S. Satterlee, M.D., Chief Medical Purveyor, U. S. A., N. Y. City, writing to Dr. Henry W. Shaw, N. Y. City, Associate of the late Dr. E. D. Hudson, says:—"I have long been conversant with your late partner's efforts in the cause of conservative surgery—his appliances for the benefit of not only those who have suffered the loss of legs and arms, but especially his apparatus for amputations at the ankle joint, after the manner of Professor Syme—and in restoring action of the arm in resection of its joints. I think the medical profession and the public are under great obligations for his perseverance and the degree of perfection to which he has brought his substitutes for nature in those cases. It gives me great pleasure to make this statement." Major William J. Sloan, Surgeon U. S. Army, writes:—"In my whole business intercourse with Dr. Hudson, while Medical Director of the Department of the East, whom you succeed, and since, I have been well satisfied with his entire ability and anxiety to do justice to the soldier and the government. His mechanical appliances for limbs and for resections are a specialty, and prove remarkably successful.—*Medical Journal.*

**LACTOPEPTINE**—We have used this article for some time in cases of indigestion, and can recommend it as a valuable remedy. Containing the firm active agents which are contained in the process of digestion, it cannot fail to aid the system in preparing the food for assimilation. It is an invaluable remedy in the summer diarrhoea of children. Owing to its great impairment of the vital forces, and feeble powers of the digestive tract, food frequently irritates and increases the difficulty. For such cases we learn of no agent in the *Materia Medica* as reliable as Lactopeptine.—*Cul. Med. Jour.*

**REMARKABLE FECUNDITY.**—A correspondent of the *Deutsche Medicinal Zeitung* reports the case of a peasant woman, married, at the age of eighteen years, in February, 1878, who has since that time given birth to ten living children, besides having had two miscarriages. At the time of writing she was in the sixth month of her thirteenth pregnancy.











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